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PENNSYLVANIA MEDICINE

JANUARY 1970

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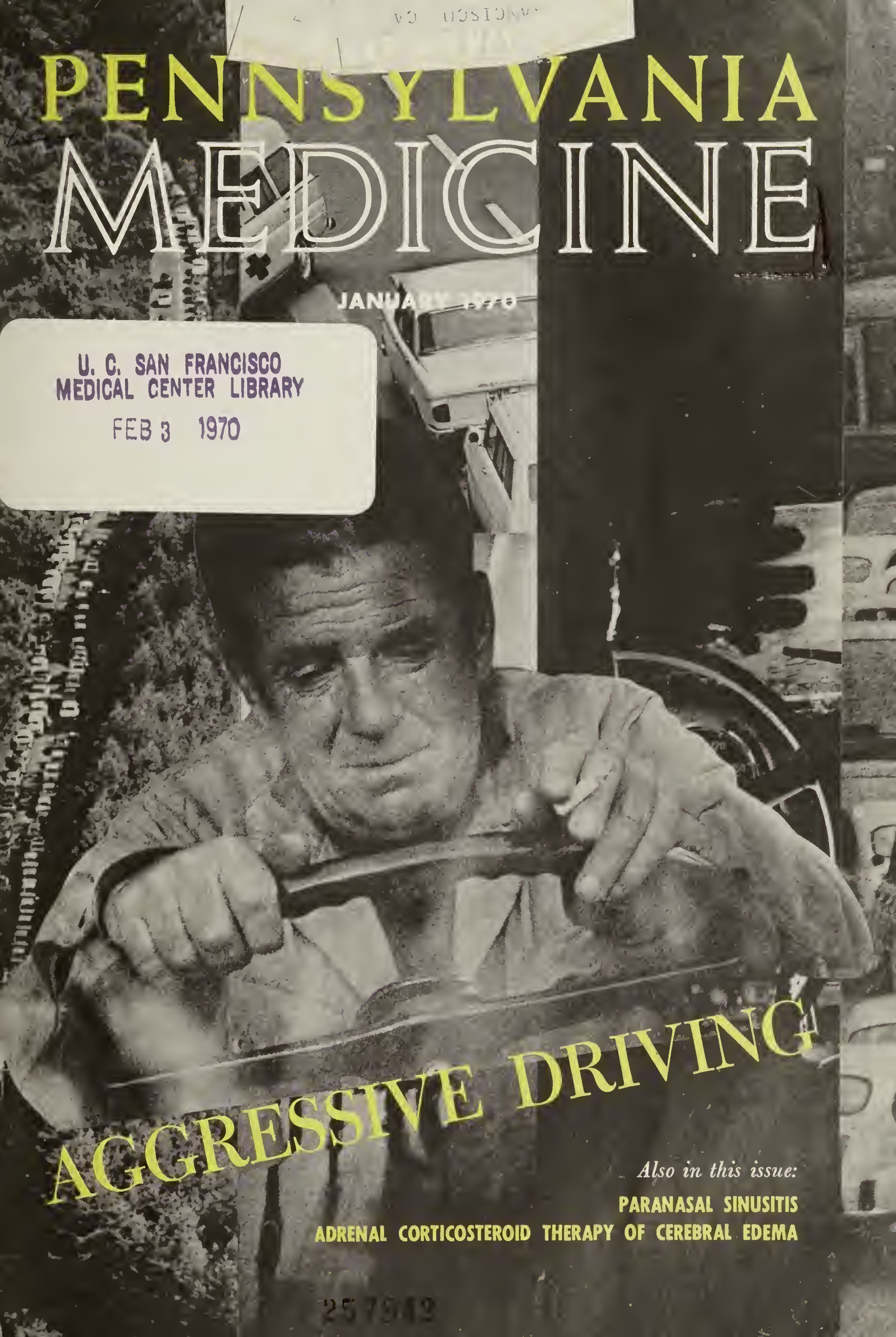

AGGRESSIVE DRIVING

Also in this issue:

PARANASAL SINUSITIS

ADRENAL CORTICOSTEROID THERAPY OF CEREBRAL EDEMA

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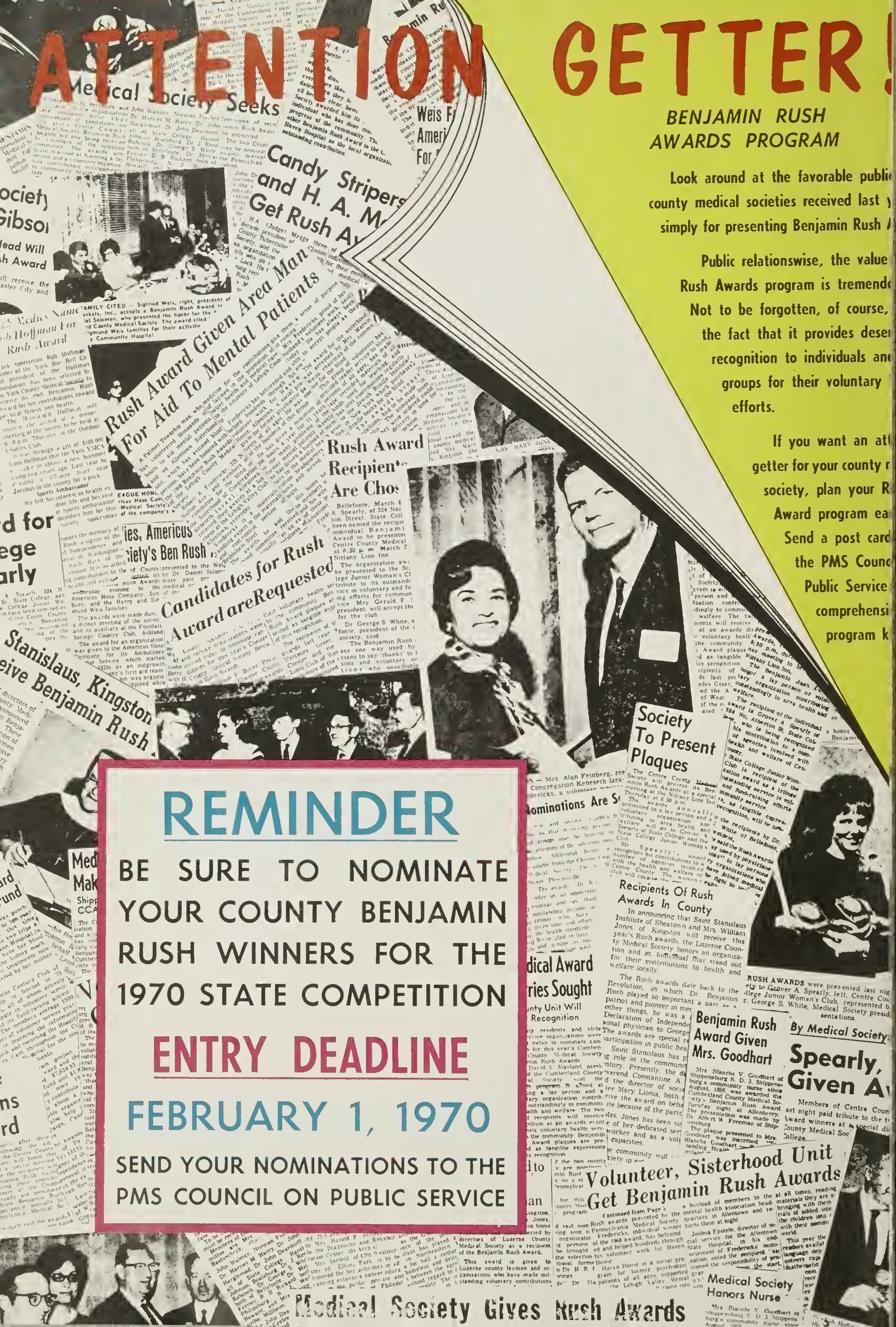
Medical Society Seeks
Candy Stripers and H. A. M
Get Rush Aw
Rush Award Given Area Man For Aid To Mental Patients
Rush Award Recipient Are Chos
Candidates for Rush Award are Requested
Stanislaus, Kingston
eive Benjamin Rush
Society To Present Plaques
Recipients Of Rush Awards In County
Benjamin Rush Award Given Mrs. Goodhart
Spearly, Given A
Volunteer, Sisterhood Unit Get Benjamin Rush Awards
Medical Society Honors Nurse
Medical Society Gives Rush Awards

BENJAMIN RUSH AWARDS PROGRAM

Look around at the favorable publi
county medical societies received last
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Public relationswise, the value
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recognition to individuals an
groups for their voluntary
efforts.

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society, plan your R
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comprehensi
program k

REMINDER

BE SURE TO NOMINATE YOUR COUNTY BENJAMIN RUSH WINNERS FOR THE 1970 STATE COMPETITION

ENTRY DEADLINE

FEBRUARY 1, 1970

SEND YOUR NOMINATIONS TO THE PMS COUNCIL ON PUBLIC SERVICE

PENNSYLVANIA
MEDICINE

/medigram

JANUARY, 1970

JBLIC HEARINGS HELD ON BILL TO INCLUDE HIROPRACTIC SERVICES IN BLUE SHIELD

The Pennsylvania House of
Representatives Committee
on Public Health and Wel-
are held hearings December 12 on Senate Bill 254, which passed the
enate in July by a vote of 34-8. This is the bill which would permit
overage of chiropractic services by Pennsylvania Blue Shield. John
. Harris, Jr., M.D., Carlisle, chairman of the PMS Council on Govern-
ental Relations, spoke against the bill on behalf of the Pennsylvania
edical Society. Also speaking against the bill was Jack Edeiken, M.D.,
rofessor and director of diagnostic radiology at Thomas Jefferson
niversity Hospital, Philadelphia, and a member of the task force
ppointed by former HEW Secretary Wilbur Cohen to make recommendations
 Congress on the Medicare program. The task force and former Secre-
ary Cohen strongly urged that chiropractic services not be covered by
edicare. The same position has been adopted by the National Council
 Senior Citizens. In his testimony, Dr. Harris said: "Since its
arly beginnings, the physicians of the Commonwealth, through the Blue
hield program, have attempted to provide a mechanism whereby individu-
ls could insure themselves against the medical cost of being ill...
and)...have made changes in the original concept very cautiously...
t is our earnest desire that vital medical services be added to the
rogram prior to any inclusion of non-medical services...I think the
hiropractors themselves...admit that they do not practice any form of
edicine, and for this reason alone, they should not be included in a
edical service organization. The Medical Society, with Blue Shield,
as embarked on quality and utilization control of services rendered
y member physicians and to the subscribers, therefore we would find
t quite impossible to guarantee any type of quality control or stand-
rds for this (chiropractic) group." Dr. Edeiken outlined the history
f chiropractic and said, "It is my opinion that chiropractic is not
edically scientific. The practitioners lack the training and back-
round necessary to diagnose and treat most known diseases. Chiroprac-
ic constitutes a hazard to the health of the Commonwealth of Pennsyl-
ania. Inclusion in an insurance program such as Blue Shield would
ncourage patients to entrust their health to those who have limited
cientific knowledge. The history of chiropractic speaks for itself."
atthew K. Gale, president of Blue Shield, also presented testimony
 opposition to the measure, placing emphasis on the unknown quantity
f added cost. Proponents included the Pennsylvania Chiropractic
ssociation and the Pennsylvania League for Consumer Protection. The
atter group based its support on the fact that the state licenses chiro-
ractors, and citizens should be offered freedom of choice. There are
bout 1,500 practitioners of chiropractic in the state, and about 100
ere present at the hearing.

ANATOMICAL GIFTS ACT SIGNED BY GOVERNOR

Governor Raymond F. Shafer December 16 signed into law the Uniform Anatomical Gifts Act, which he received for action after the House of Representatives reluctantly accepted several weakening amendments made by the Senate before it passed the bill. The law permits the donating of an individual's body, or any organs, for scientific use. One of the amendments added by the Senate would permit the next of kin to have the body for a funeral before it is donated to science.

BLUE SHIELD'S NEW PREVAILING FEE PROGRAM TO BE OFFERED EARLY IN 1970

Matthew K. Gale, Pennsylvania Blue Shield president, has announced that the new and expanded prevailing fee program will be offered to present and new subscribers early in 1970. Payment for a comprehensive list of benefits in the new program will be based on the usual, customary and reasonable charges of doctors, rather than on a fixed fee schedule. Enrollment will start with groups in January and with non-group subscribers by April 1 on schedules developed by the five Blue Cross plans and the Inter-County Hospitalization Plan, which are selling agents for Blue Shield. Four benefits not previously available to small groups or non-group subscribers are included in the new program. They are: emergency services, pathology examinations, physiatry and shock therapy. Special meetings for doctors and their assistants to explain these and other aspects of the new program are being planned by Blue Shield for March and April. Details of the program will appear in a subsequent issue of "Pennsylvania Medicine".

DR. BROWNELLER, MR. MILLER NEW STATE SECRETARIES

E. R. Browneller, M.D., administrative director of Geisinger Medical Center, Danville, accepted the post of secretary of the Pennsylvania Department of Health following the resignation of Thomas W. Georges, M.D., secretary of the Department of Public Welfare and acting secretary of health. Stanley Miller, Harrisburg, was appointed secretary of public welfare. He had served as consultant to Governor Shafer on human relations. Dr. Georges resigned to accept a post at Temple University Health Sciences Center.

PENNSYLVANIA HEALTH CONFERENCE TO STUDY HEALTH MANPOWER IN THE 70'S

The Eighteenth Annual Pennsylvania Health Conference will be held June 14, 15 and 16, at the Penn Harris Motor Inn, Camp Hill. Theme of the conference, according to Mrs. Catherine B. Bauer, chairman, is "Health Manpower in the 70's". There are nine sponsoring agencies, including the Pennsylvania Department of Health and the Pennsylvania Medical Society.

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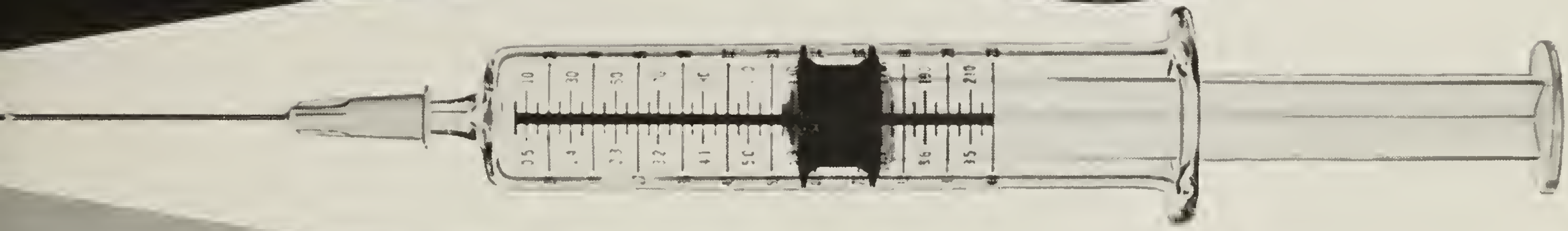

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PENNSYLVANIA MEDICINE

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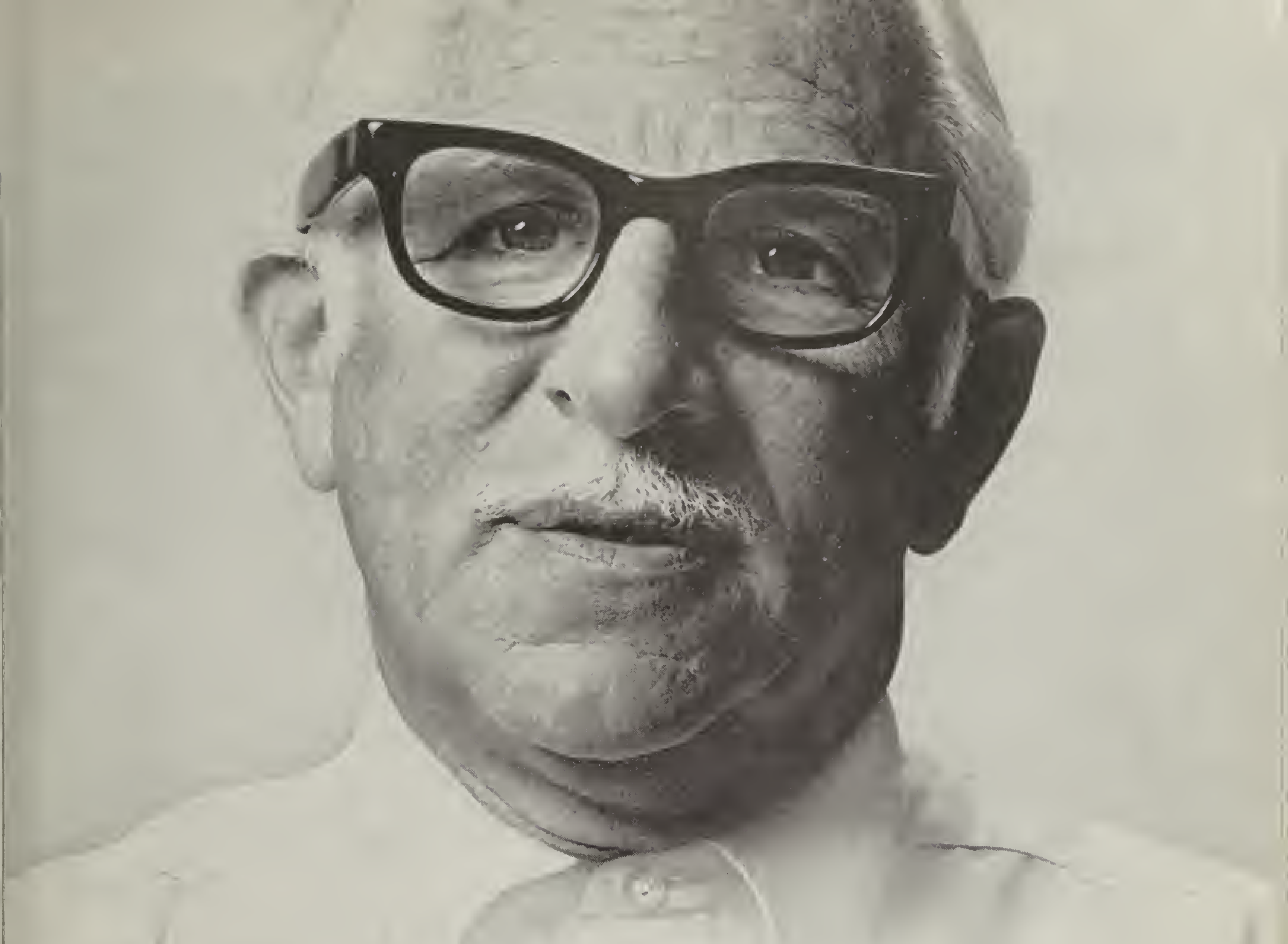

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For your susceptible candidates, prescribe DECLOSTATIN—the broad-spectrum therapy that prevents monilial overgrowth.

Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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PENNSYLVANIA MEDICINE

newsfronts

Doctors, Nurses Exchange Ideas

Second Patient Care Conference

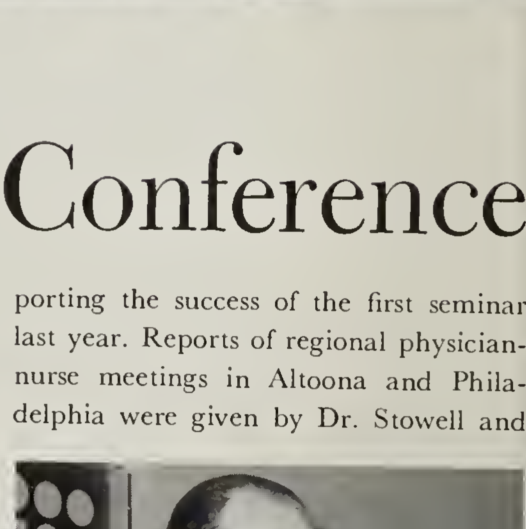
A second step toward resolving differences in the approach to better patient care was taken last November when nearly forty nurses and physicians from throughout the Commonwealth held a joint meeting at Pennsylvania Medical Society headquarters in Lemoyne.

Speakers addressing the nurse-physician gathering included Malcolm W. Miller, M.D., chairman, PMS Committee on Relationships with Allied Professions.

The day-long conference was a sequal to the historic first meeting which took place last year and set the stage for long-range studies and planning to upgrade the delivery of health services to the citizens of Pennsylvania through closer physician-nurse understanding and cooperation.

Speakers addressing the nurse-physician gathering included Dr. Miller, Joseph M. Stowell, M.D., member, PMS Committee on Relationships with Allied Professions; Mrs. Elizabeth Groff, R.N., representative of the Pennsylvania Nurses Association; Charles Leedham, M.D., chairman, AMA Committee on Nursing; Dorothy Novello, R.N., Ph.D., former president of the Pennsylvania League for Nursing; Pascal F. Lucchesi, M.D., medical director of the Albert Einstein, Medical Center, Philadelphia, and Miss Kathryn Grove, R.N., executive director, Pennsylvania Nurses Association.

Dr. Miller opened the November session by introducing William A. Barrett, M.D., newly-elected President of the Pennsylvania Medical Society, and reporting the success of the first seminar last year. Reports of regional physician-nurse meetings in Altoona and Philadelphia were given by Dr. Stowell and



Charles Leedham, M.D.

Joseph M. Stowell, M.D.
Mrs. Elizabeth Groff, R.N.

Dr. Dorothy Novello, Ph.D.

Pascal F. Lucchesi, M.D.
Miss Kathryn Groff, R.N.

Held

Mrs. Groff. The morning session concluded with a discussion of future plans and goals and meetings of the future by Doctors Miller and Leedham, followed by an open forum with audience and panel member participation.

Malcolm W. Miller, M.D.

Under the general category of "Present Issues in Delivery of Health Services," with Dr. Novello presiding, Dr. Lucchesi informed the afternoon gathering on the responsibility for para-medical supervision in the hospital setting and Miss Grove discussed collective bargaining. The afternoon session adjourned following an open discussion between guests and panel members.

A comprehensive report of conference proceedings will appear in a later issue of Pennsylvania Medicine.

Some M.D.'s Now Qualify For S.S. Disability Benefits

Many self-employed physicians reached an important social security landmark last October. With their earnings covered since 1965, they have now contributed to social security long enough to be insured for disability.

Social security disability benefits can be paid to an insured person under sixty-five who has a physical or mental impairment so severe as to keep him from doing any substantial work for a year or longer. Payments begin after a waiting period of six full calendar months.

Benefits can be as much as $218 a month for a disabled person alone and up to $434.40 a month for a family. Self-employed physicians disabled in the immediate future, however, would probably not yet be eligible for these maximums since their earnings have been covered by social security for a relatively short time. Benefits are figured from a person's average covered earnings over a period of years.

"This disability protection can be a valuable supplement to the physician's private insurance," said Bernard Popick, director of social security's disability program. "It is part of the total social security package of protection—disability, retirement, survivors and health insurance—toward which the physician has been contributing."

CV Scholarship Available To Pa. Medical Students

Applications are now being accepted from Pennsylvania junior and senior medical students for the E. V. Allen Memorial Scholarships which provide three months of cardiovascular study at the Mayo Clinic, Rochester, Minn., as well as $1,000 award.

Deadline for applications is April 1, 1970. Applicants will be notified by May 1, 1970.

Brochures may be obtained by writing to Minnesota Heart Association, 4701 West 77th Street, Edina, Minn. 55435.

Convalescing . . . but still a long way to go. Anxiety can make it even longer.

Convalescence following medical or surgical procedures may be almost endless to an anxious patient. And, indeed, anxiety with some patients actually retards progress—for example, by inducing insomnia and reducing cooperation.

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Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

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2. Forty cases reported.
3. Cites synergism between androgen and thyroid.
4. No side effects in patients treated.
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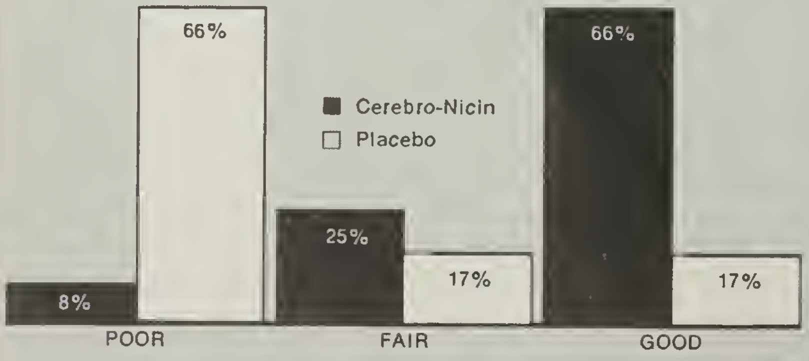

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Riboflavin	2 mg.
Pyridoxine	3 mg.

DOSAGE: One capsule t.i.d. or as prescribed by physician.

AVAILABLE: Bottles of 100, 500, 1000 capsules.

Also elixir 8 oz. bottles.

CONTRAINDICATIONS: There are no known contraindications to Pentylenetetrazole although caution should be exercised when treating patients with a low convulsive threshold.

Most persons experience a flushing or tingling sensation after taking a higher potency niacin-containing compound. As a secondary reaction some will complain of nausea and other sensations of discomfort. This reaction is transient and is rarely a cause of discontinuance of the drug if the patient is forewarned to expect the reaction.

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*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl., of the Amer. Ger. Soc. June, 1964

newsfronts

PMS Group Meets on Rural Health Problems

Health care delivery *was high on the agenda of the November meeting of the PMS Advisory Committee on Rural Health chaired by Ross E. Bryan, M.D. The meeting, attended by: (left to right from foreground) Mrs. Kenneth Bostwick, women's committee chairman, Pennsylvania Farmers' Association; Trin F. Dumlao and Mel Woodward, Ph.D., Susquehanna Economic Development Association; Ernest J. Witte, V.M.D., Veterinary Association; George R. Carpenter, M.D., assistant director, bureau of field services, State Dept. of Health; Robert N. Moyers, M.D., Meadville; Lee G. Jinks, Agricultural Extension Service, 4-H Clubs; Ward M. Stover, county agricultural agent; Dr. Bryan and, not in camera range, Arthur E. Pollock, M.D., Altoona, also met to renew liaison with organizations which had been active consultants to the former Commission on Rural Health.*

Hershey Offers M.S./Ph.D. Pharmacology Program

An M.S./Ph.D. program in pharmacology to be conducted at The Milton S. Hershey Medical Center of The Pennsylvania State University has been approved by the University Board of Trustees.

In making the announcement, George T. Harrell, M.D., dean and director at Hershey, said that this is the first time that Penn State has offered a degree in this field. Recipients of the Ph.D. degree will have accomplished independent scholarly work and acquired professional competence for teaching and conducting research in medical schools, scientific institutes or pharmaceutical firms. The M.S. degree recipients will follow professional careers as senior technicians or research assistants.

The program is headed by Dr. Elliot Vesell, professor and chairman of pharmacology and professor of genetics at Hershey. In describing the program, Dr. Vesell said that "pharmacology, simply stated, is the study of drugs." In recent years, however, the field has expanded tremendously due to concentrated research in several areas. New specialized subdivisions include toxicology, pharmacogenetics, cardiovascular pharmacology, neuropharmacology, endocrine pharmacology, molecular pharmacology, and clinical pharmacology. Thus, pharmacology must now be considered a science dealing with multiple aspects of the interaction of chemical agents with biological systems or parts of biological systems such as tissues, cells or subcellular particles.

The department at Hershey currently has seven staff members and four postdoctoral fellows. Research currently done by faculty members is focused on drug metabolism, endocrine pharmacology, neuropharmacology, cardiovascular pharmacology and clinical pharmacology. Dr. Vesell's research concerns individual differences in handling drugs due both to genetic and numerous environmental factors. The department at Hershey has outstanding laboratory facilities.

With the addition of the new program, the medical center now offers approved Ph.D. and M.S. degree programs in anatomy, biological chemistry, physiology and pharmacology. A program in microbiology is expected to be approved shortly. A postdoctoral program for graduate veterinarians leading to an M.S. degree with a major in laboratory animal medicine, now in its second year of existence, is the only one offered in the state.

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By including Mucomyst-10 in the home management regimen, you can provide full mucolytic benefits for many of your patients with chronic bronchitis and emphysema complicated by tenacious secretions.

Indications: Mucomyst has been demonstrated to be clinically effective as adjuvant therapy in a wide range of conditions in which thick, viscous mucus is a problem, including: postoperative atelectasis and pneumonia; chronic bronchopulmonary disease (emphysema, chronic bronchitis, asthma, and bronchiectasis); acute bronchopulmonary disease (pneumonia, bronchitis, and tracheobronchitis); tracheostomy care; facilitation of bronchial studies; maintenance of an open airway during anesthesia; and to help control pulmonary complications of cystic fibrosis. **Contraindications:** Mucomyst is contraindicated in those patients who are sensitive or who have developed a sensitivity to it. **Warnings: After proper administration of acetylcysteine, an increased volume of liquefied bronchial secretions may occur. When cough is inadequate, the open airway must be maintained by mechanical suction if necessary. When there is a large mechanical block due to foreign body or local accumulation, the airway should be cleared by endotracheal aspiration, with or without bronchoscopy. Asthmatics under treatment with Mucomyst should be watched carefully. If bronchospasm progresses, this medication should be immediately discontinued. Adverse Effects:** Adverse effects have included stomatitis, nausea and rhinorrhea. Sensitivity and sensitization to Mucomyst have been reported very rarely. A few susceptible patients, particularly asthmatics (see **Warnings**), may experience varying degrees of bronchospasm associated with the administration of nebulized acetylcysteine. Most patients with bronchospasm are quickly relieved by the use of a bronchodilator given by nebulization. **Administration & Dosage:** Mucomyst may be administered by nebulization into a tent, Croupette, face mask, or mouthpiece; or by direct instillation. **Mucomyst should not be placed directly into the chamber of a heated (hot-pot) nebulizer.** Complete details on dosage, administration, and compatibility are included in the package insert. Additional information may be obtained from Mead Johnson Laboratories. **Supplied: Mucomyst-10 (acetylcysteine)**, a sterile 10% solution, in vials of 10 ml. and 30 ml.; **Mucomyst (acetylcysteine)**, a sterile 20% solution, in vials of 10 ml. and 30 ml.

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newsfronts

County Recommends Air Pollution Control Code

The Allegheny County Board of Health recommended adoption of a new rigorous air pollution control code—one of the strictest in the nation—at a public meeting last month.

Frank B. Clack, M.D., Health Department acting director, said the new tightened Rules and Regulations for Air Pollution Control in Allegheny County clearly take a long-range view. "Instead of going by what is claimed to be economically feasible today, the new code sets a goal that will serve county citizens for years to come. It spells out some of the tightest emissions limits in the nation. Those who say they cannot meet them today will have to come in and justify their requests for more time."

"We don't want to start out with a new set of rules every few years as new technology becomes available," he added. "If these emissions limits are too tight to be met immediately, the burden is on industry to come in and seek a temporary exception, the law still will remain intact. An appeals board is established to hear, one by one, from the people who say they need more time and technology to meet our rules."

Among basic changes provided in the county's proposed new Air Pollution Control code:

- Establishes a Board of Appeals and Variance Review—a five-member panel to be appointed by the county commissioners—to consider appeals for variances from the new requirements.
- Removes all exceptions in the regulations for electric furnaces and basic oxygen furnaces. Existing plants will be required to meet the new tightened limits for smoke and particulate emissions.
- Establishes new tightened limits for particulate matter.
- Lowers sulphur emissions limits from 4.0 pounds per million BTU to 2.5 pounds per million BTU. This matches the sulphur limits currently on the books in New York, New Jersey and St. Louis.
- Prohibits water quenching of slag, which produces hydrogen sulphide.
- Prohibits all open fires except for recreational purposes. This includes backyard burning of trash.
- Provides an injunctive procedure that would permit the county to order a complete shutdown of operations for certain violations.
- Provides for raising fines to $1000 per violation per day when this becomes permissible under Pennsylvania state law.
- Provides an alert warning emergency system that calls for warnings at pollution levels lower than those established for emergency procedures anywhere in the country.
- Establishes the right of Health Department officials to monitor, test and inspect industrial installations and to require pertinent schedules, records and reports.

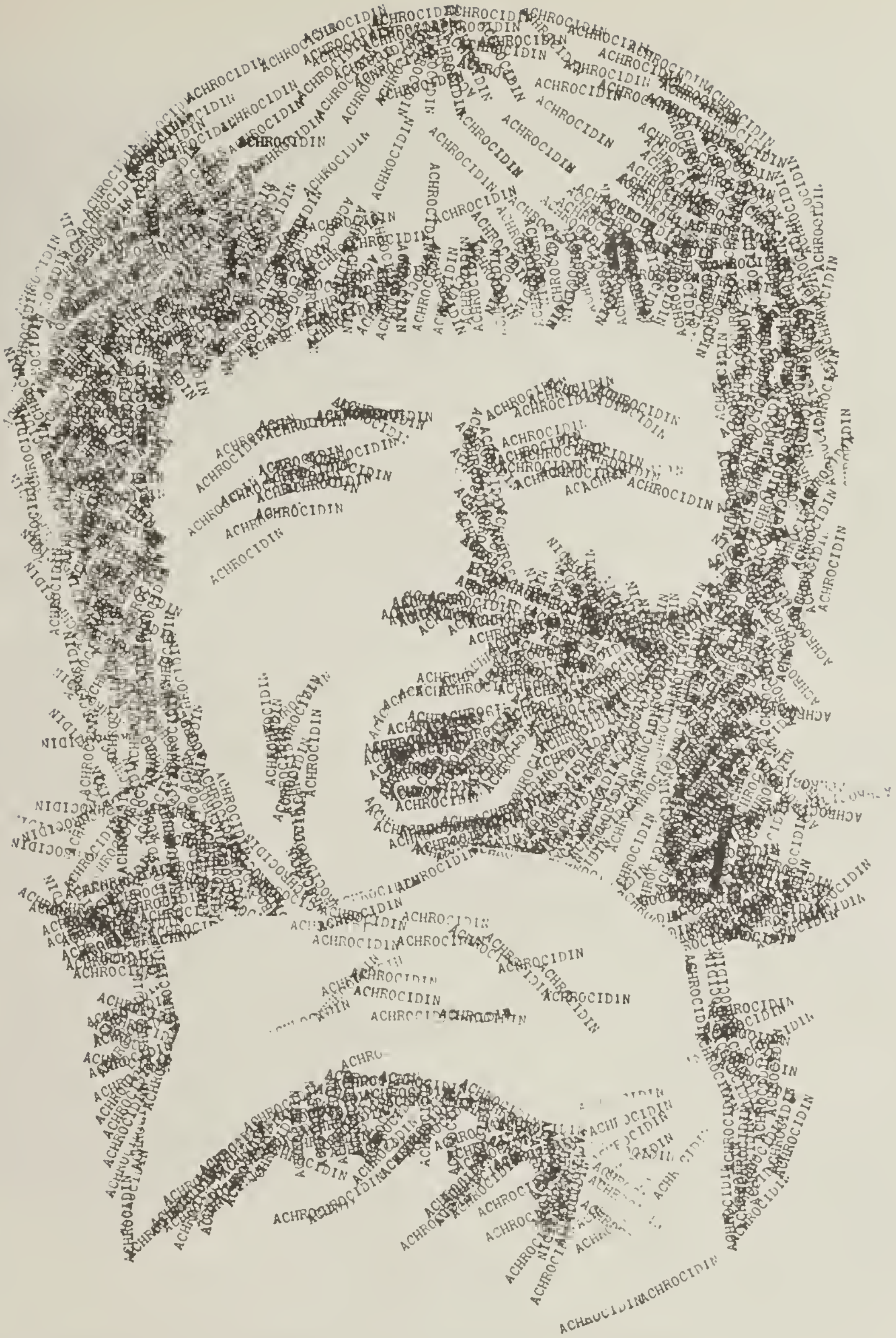
The new rules adopted by the county commissioners became effective January 1, 1970.

1969-70 Regional Advisory Group Named

The 1969-1970 Regional Advisory Group *of the Susquehanna Valley Regional Medical Program (SVRMP) is made up of physicians, dentists, nurses, hospital administrators, other health workers and the general public who are interested in improving care for the 2.1 million people of SVRMP's region. Responsible for providing overall advice and guidance for the program and for reviewing all applications for operation projects submitted under the SVRMP are: (left to right) seated—A. H. Claster, Lock Haven, lumber and building supplies; George T. Harrell, Jr., M.D., dean, College of Medicine, Pennsylvania State University; James C. Kirk, administrator, Pottsville Hospital; John F. Rineman, executive director, PMS; Ellsworth R. Browneller, M.D., administrator, Geisinger Medical Center; J. Reed Babcock, M.D., Bellefonte; Richard B. McKenzie, director, SVRMP; J. Frank Gayman, Chambersburg, automotive sales; William C. Beck, M.D., Sayre; standing—George C. Williams, Esq., Wellsboro, attorney; Raymond E. Curanzy, M.D., Palmyra; Patrick M. Greene, director of Community services, Pennsylvania AFL-CIO; Robert A. Kumpf, administrator, Lewistown Hospital; Richard E. Cummings, administrator, J. C. Blair Memorial Hospital, Huntingdon; Ruth Morgan, R.N., director of the division of public health nursing, Commonwealth of Pennsylvania; Margaret A. Greiner, R.N., director of nursing, Altoona Hospital; Charles E. Schlager, M.D., York; H. Brooker Mills, D.O., York, Raymond C. Grandon, M.D., Harrisburg; Theodore R. Baranik, administrator, Memorial Hospital of Bedford County; Donald S. Mayes, D.D.S., Sunbury; John H. Garris, Sr., M.D., Harrisburg; J. Mostyn Davis, M.D., Shamokin, Claude E. Nichols, M.D., Harrisburg, and Kenneth W. Hylbert, D.Ed., director of rehabilitation education programs, Pennsylvania State University. (Members not photographed include: J. R. Clark, D.D.S., deputy secretary of health, Commonwealth of Pennsylvania; John H. Harris, Jr., M.D., Carlisle; Ross K. Childerhose, M.D., Harrisburg; Charles L. Youngman, M.D., Williamsport, and Raymond S. Treon, D.Ed., associate professor of special education, Millersville State College.)*

IMMUNIZATION PROMOTION MATERIAL AVAILABLE

Free immunization pamphlets and tabletop posters for waiting rooms as patient reminders are available to the PMS membership simply by noting quantity desired and your name and address on a postcard to the PMS Council on Public Service. (Note: Data on rubella vaccine not included.)



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CHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment f tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the pper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly atients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to etracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

ontraindications: Hypersensitivity to any omponent.

arning: In renal impairment, since liver toxity is possible, lower doses are indicated; durg prolonged therapy consider serum level eterminations. Photodynamic reaction to sunight may occur in hypersensitive persons. hotosensitive individuals should avoid exposure; discontinue treatment if skin discomfort ccurs.

recautions: Drowsiness, anorexia, slight gasic distress can occur. In excessive drowsiess, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

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Temple Awarded Center Grant

Temple University Health Sciences Center has received a federal grant of 2.3 million dollars for construction of a Pharmacy, Nursing and Allied Health Sciences Center.

Approval of the grant by the Division of Educational Research Facilities of the National Institutes of Health put funding for the five-story, 10.1 million dollar center over the top. The General State Authority has allocated 6.1 million dollars as its share of the project.

The 4.2 million dollar student center will have a gymnasium, handball courts, theater, bookstore, cafeteria, billiard room, student meeting rooms and offices and conference rooms for the continuing education of physicians and other professionals.

The newly-appointed Task Force on Data Collection and Retrieval at its first meeting in Philadelphia agreed to study the feasibility and need for a statewide health data collection bank.

Under chairmanship of Andrew G. Freeman, executive director, Philadelphia Urban League, the task force will assist the state Advisory Council for Comprehensive Health Planning by studying health data systems in depth.

Among its responsibilities, the task force will identify the responsibilities and functions of a central center in the state for health statistics, and the specific data needed for comprehensive health planning.

As required by the law on comprehensive health planning, the majority of the task force members are consumers. These are persons who do not provide professional health services, such as housewives, businessmen, lawyers, legislators and representatives of labor and the disadvantaged.

The other members of the task force are providers of health services such as physicians, therapists and sanitary engineers. The requirement of consumer participation in comprehensive health planning reflects the general public's increased interest in health affairs.

Guest speakers *at the PMS Speakers' Bureau Seminar on Drug Abuse included (left to right) Frederick B. Glaser, M.D., director, partial hospitalization program, Temple University Community Health Center; Reverend Delmar A. Ross, superintendent, Teen Challenge, Rehrersburg and members of the Teen Challenge organization.*

PMS Drug Abuse Seminar Held

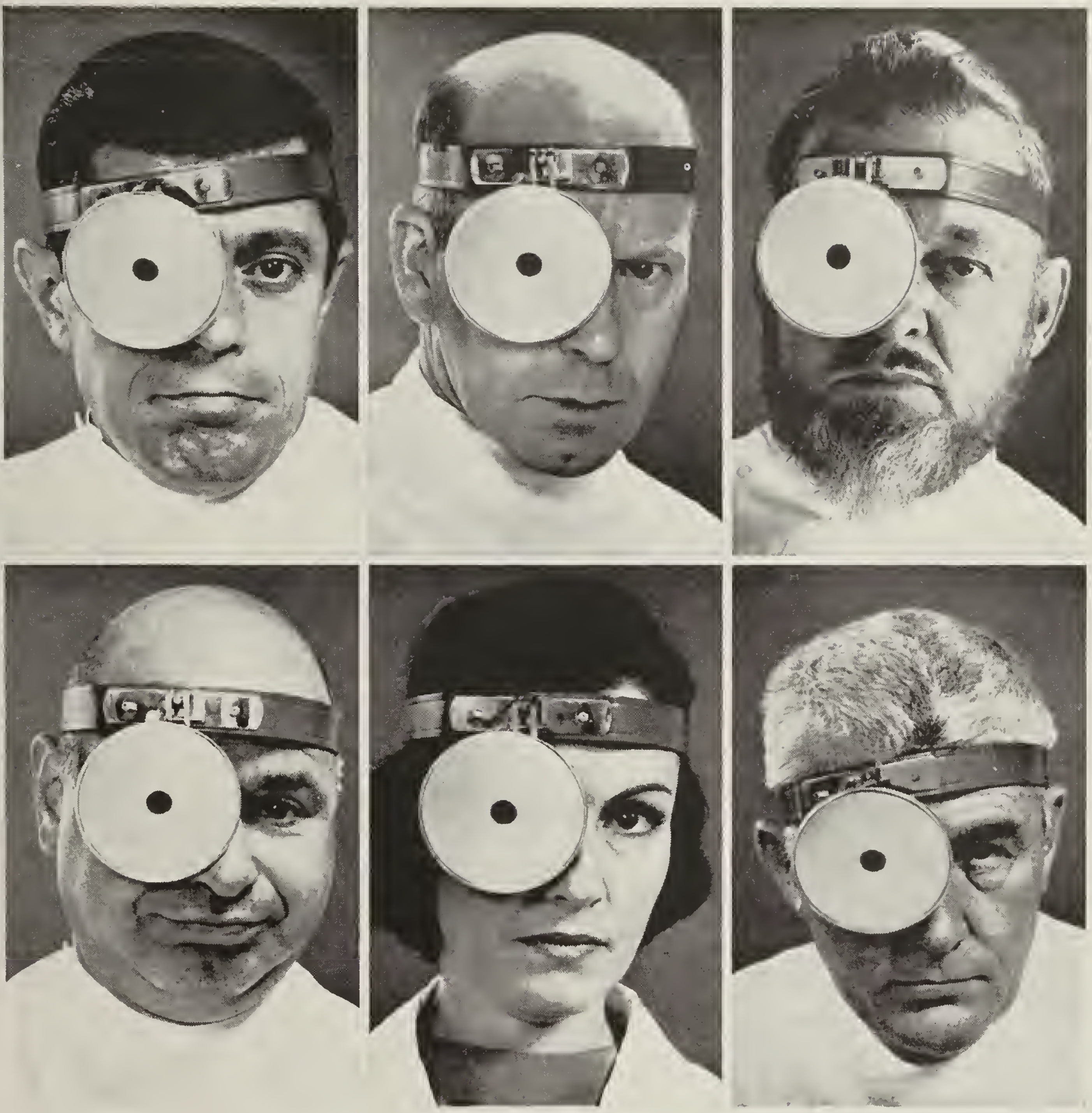
The PMS Council on Public Service, at the recommendation of the Speakers' Bureau Committee, conducted a one-day Drug Abuse Seminar for members of the bureau so that they could be better prepared to handle the increasing number of speaking requests on this popular topic.

Moderated by Arthur E. Pollock, M.D., chairman, PMS Speakers' Bureau Committee, the program included discussions on the subjects: "Types of Drugs and Their Effects," Treatment of Drug Users," and "Drugs from the User's Standpoint."

Program participants were most informative and numerous controversial points prompted an active question and answer period. In addition to the information provided by the speakers, the committee distributed packets of literature on drug abuse, including sample speeches.

Types of Drugs *and Their Effects are discussed by Martin D. Kissen, M.D., director, Institute for Alcoholism and Narcotic Addiction, Philadelphia.*

Nearly twenty *members of the PMS Speaker's Bureau and guests attended the November 20 PMS Seminar on Drug Abuse.*



"All Otolaryngologists are Alike"

Just look at them and you can see how much they have in common. Besides, they all go through pretty much the same training, and pass the same kinds of tests, and measure up to the same sort of standards. Therefore, all otolaryngologists are alike. Right?

Wrong! But that's no more preposterous than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more exacting. In fact, there are at least nine *specific differences* involving moisture content, purity, potency and speed of tablet disintegration, which make the manufacture of Bayer® Aspirin so different.

These Bayer standards result in significant product benefits, including gentleness to the stomach and product stability, that enable Bayer Aspirin tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that *all* aspirin tablets are alike, you can say, with confidence, that "it just isn't so."

You might also say that all otolaryngologists aren't alike, either.

newsfronts

Citizens Trained As Medical Techs in Pilot Project

How educationally disadvantaged citizens can be trained to become emergency medical technicians (EMT's) has been demonstrated in a community pilot project by the department of anesthesiology at the University of Pittsburgh School of Medicine and Presbyterian-University Hospital.

Men and women from Pittsburgh's ghetto areas were trained in such life-support techniques as inhalation therapy, tracheal intubation, venous infusion, cardiopulmonary resuscitation and artificial ventilation.

The trainees are considered capable of staffing mobile intensive care-units for life-saving and life-support at the scene and en route, said Donald M. Benson, M.D., and Peter Safar, M.D., in their report to the American Society of Anesthesiologists.

"The EMT's are manning a university hospital-based service with mobile intensive care units built from inexpensive vans," said Dr. Benson. "They are directed, trained and regularly debriefed by anesthesiologists.

"They could serve as helpers for anesthesiologists where ambulance work alone does not occupy them full time, such as in rural hospitals. Other pilot projects, meeting social and medical needs simultaneously, should be tried."

The twelve months of training consists of four parts. First is preclinical and involves anatomy, physiology, first aid, inhalation therapy, using manikins and the animal laboratories. The second period involves clinical hospital experience in anesthesiology, operating room, intensive coronary unit, delivery room, emergency room, morgue and seminars. The third period consists of field experience, including rescue, extrication, communication, emergency vehicle operation and defensive driving. The fourth period is on-the-job training under medical supervision.

Philadelphia Officials Tour PMS

Membership record *keeping of the Pennsylvania Medical Society is described to James R. Hickox (center), associate executive director of the Philadelphia County Medical Society and Richard M. Nelson (right), the county society's executive director, by Charles G. Appleby, Jr., PMS acting business manager. The Philadelphia guests were hosted by PMS in a day-long familiarization tour of state society activities last month.*

Academic Goals Set

Hahnemann, 3 Hospitals Affiliate

The Hahnemann Medical College and Hospital of Philadelphia has made academic affiliations with three area hospitals according to an announcement by Charles S. Cameron, M.D., president. The hospitals are Harrisburg Polyclinic Hospital, Harrisburg; Crozer-Chester Medical Center, Chester; and Friends Hospital, Philadelphia.

Members of the medical staffs of these affiliating hospitals will receive appointments to the faculty of the Hahnemann Medical College. Each hospital, however, retains its individual corporate identity but will collaborate in medical education, medical research and patient care.

Four Hahnemann medical students will be assigned to Harrisburg Polyclinic every six weeks. Students, during elective periods, may elect an affiliation at Harrisburg on any service. Included in the educational plans are participation in teaching rounds and special conferences in the various subsections of medicine.

For Crozer-Chester Medical Center this affiliation is another step in the long range program of the development of the hospital into a full-fledged medical center. The first year has brought a total of seven resident physicians and twenty junior and senior medical students to Crozer. By 1970, the number will increase to eleven resident physicians and thirty medical students.

Last September, medical students began training at Friends. The psychiatric residency program begins next summer. A liaison committee is being formed to plan and coordinate joint programs between Hahnemann and Friends to facilitate development and cooperative patient care programs and experimentation in such fields as community health education.

the common denominator in G.U. therapy

In G. U. therapy, the first consideration is control of infection. To your patient, a primary concern is *relief from pain*. URISED provides rapid relief from pain, and relaxation of smooth muscle spasm through parasympatholytic action of atropine and hyoscyamine.

URISED is not a dramatic "wonder drug" but a useful one that has served the medical profession for more than fifty years. You can rely on URISED; it has gained the confidence of physicians who have written more than one million prescriptions for their patients.

URISED is a mild but reliable agent with a low order of toxicity. It can be used alone to treat uncomplicated urinary tract infections where the invading organisms are susceptible to methenamine and methylene blue in an acid medium. URISED can provide "interim therapy" while awaiting complete laboratory diagnosis. It can also be used as an adjunct (to relieve pain and spasm) with almost any other form of antibacterial therapy).

For prompt relief of the distressing symptoms of pain, burning, frequency, dysuria, and spasm, consider URISED. Your patient will recognize its presence by the characteristic blue-green urine.

keeping your patient comfortable

PRECAUTIONS: Administer with caution to persons with known idiosyncrasy to atropine or cardiac disease.

SIDE EFFECTS: Neither irritation nor other untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occur, decrease dosage. If rapid pulse, dizziness, or blurring of vision occur, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

DOSAGE: Adults—Two tablets, orally, four times per day followed by liberal fluid intake. Acute cases—Initially two tablets every hour for three doses followed by the recommended daily administration. Children—One-half the adult dose.

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Each blue-coated tablet contains active:

Atropine Sulfate	0.03 mg.	Methylene Blue	5.4 mg.
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Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

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New Library System Aids Heart, Cancer, Stroke Research

Western Pennsylvania health professionals will now have greater access to the latest and most comprehensive information about patient care in heart disease, cancer, stroke and related diseases through the development of a library system created by the Western Pennsylvania Regional Medical Program.

Through the cooperation of hospital libraries in twenty-six counties of western Pennsylvania and the University of Pittsburgh's Health Center libraries, medical librarians may receive photocopies of material not available in their locale, bibliographies on relative subjects through both manual and automated searches and assistance in the selection of non-print and audiovisual aids.

The project includes a union list of serials from regional hospitals and the University's Health Center libraries. This printed list of journal titles and library acquisitions would inform hospital librarians which materials are held by individual medical libraries in the region.

In addition, a "current awareness" searching is available on a regular basis. This means that, given a particular subject, the librarian and her staff will pass on relative information as it comes to their attention.

When a request cannot be fulfilled by the project, it is then sent to the National Library of Medicine in Bethesda, Maryland, the Library of Congress or other appropriate resources.

Those requesting information or service may contact Miss Catherine M. Brosky by calling (412) 683-1620, extensions 2108 or 2192 or writing her at 102 Parran Hall, University of Pittsburgh, Pittsburgh 15213.

States Contribute $142 million to Medical Education

State governments contributed $142 million to the support of U. S. medical schools for the year 1966–67, according to figures released recently by the Association of American Medical Colleges.

A total of forty-six public schools received $129 million in state appropriations and eight private medical schools received $12 million. In Pennsylvania, six privately owned medical schools in the state received $10 million. Two other states, Florida and Kentucky, contributed $2 million to the private schools in those states.

State aid or subsidies differ from state appropriations for support of the medical schools in that they are outright payments (usually made to private rather than to public schools) which may be applied to the general budget of the college without restrictions.

The table shows the formal aid program of five states which support medical colleges. Six other states currently are considering such support.

Programs of State Aid to Medical Schools

State	Program
Florida	$4,500 to "the first accredited and approved medical school for each year a legal resident of Florida is enrolled."
New York	1) $2,000 for each M.D. or Ph.D. degree awarded beginning September 1969. 2) $6,000 per medical student per year above average number enrolled between 1962–67. Minimum increase—5 admissions. Maximum increase—25 admissions. No residency restriction. 3) $5 million per school participating in the increase for construction.
Ohio	$4,800 per full-time equivalent in medical school. $5,100 proposed for 1970.
Pennsylvania	Amount negotiated annually on basis of expenditures and enrollment. 1969 varied from $3,700–$3,900 per student.
Kentucky	A subsidy is provided to the University of Louisville School of Medicine but not on a per capita basis.

Noted Author Named Assistant

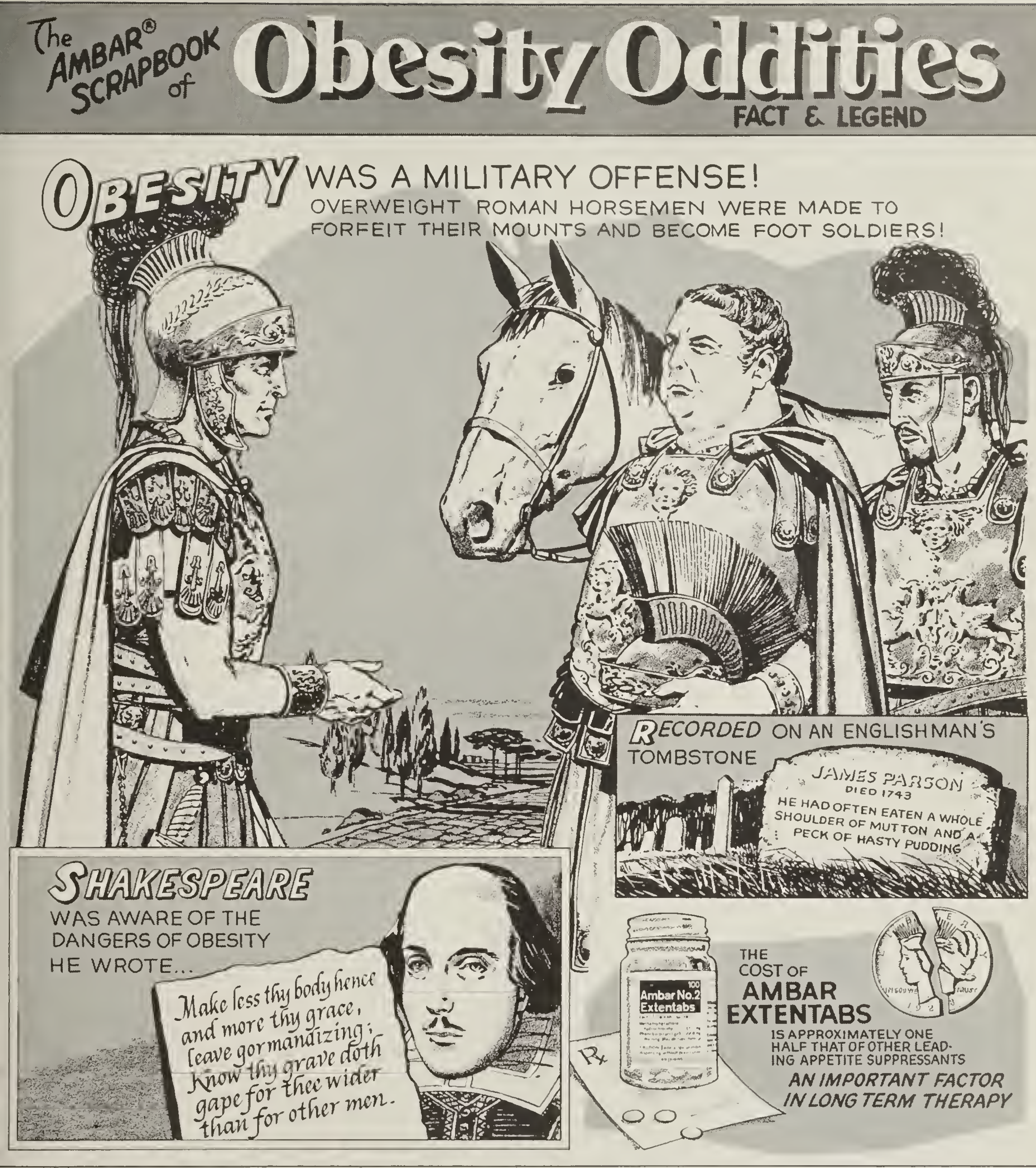
HEW Creates Malpractice Post

The director of the Community Health Service of the Department of Health, Education, and Welfare, Assistant Surgeon General John W. Cashman, M.D., has announced the appointment of Eli P. Bernzweig, to serve in the newly-created position of special assistant for malpractice research and prevention.

Working with medical and legal associations, the health insurance industry, consumer groups and other interested bodies, Mr. Bernzweig will seek a common exploration of the growing problem of malpractice and malpractice claims, Dr. Cashman said.

He added that research will be stimulated in the areas of health care, health economics, medical standards, the psychological aspects of health care and the pertinent relationships between medicine and law. A national clearinghouse for malpractice claims statistics is planned also.

Mr. Bernzweig, a graduate of Rutgers Law School, has authored two books on medico-legal subjects: *Nurses' Liability for Malpractice* and *Legal Aspects of PHS Medical Care.*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JAMES PARSON
DIED 1743
HE HAD OFTEN EATEN A WHOLE SHOULDER OF MUTTON AND A PECK OF HASTY PUDDING
SHAKESPEARE WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...
Make less thy body hence and more thy grace, leave gormandizing; Know thy grave doth gape for thee wider than for other men.
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THE COST OF AMBAR EXTENTABS IS APPROXIMATELY ONE HALF THAT OF OTHER LEADING APPETITE SUPPRESSANTS
AN IMPORTANT FACTOR IN LONG TERM THERAPY

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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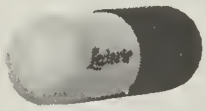

Every pharmacist knows ACHRO® V stands for ACHROMYCIN® V

Contraindications: Hypersensitivity to tetracycline.
Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage. Upon adverse reaction, stop medication and treat appropriately.

Achromycin® V
Tetracycline

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newsfronts

Hemophilia Study Produces Control For Bleeding

A high potency, highly purified concentrate of antihemophilic factor (AHF), for the prevention or control of bleeding episodes in victims of hemophilia, has been developed by the American Red Cross under a research contract awarded by the National Blood Resource Program of the National Heart Institute.

The new concentrate contains some 40–100 times as much AHF as does an equal volume of whole blood or plasma. It promises to be a major advance in the medical management of hemophilia A, by far the most common of the hereditary bleeding diseases that, in the aggregate, afflict an estimated 100,000 Americans.

The concentrate is prepared from blood plasma by a polyethylene glycol precipitation technique developed by Dr. Alan Johnson, of the American Red Cross Laboratory at New York University Medical Center, New York City. The technique is relatively simple and is suitable for extracting the AHF from large batches of plasma. The AHF-free plasma can subsequently be processed to yield albumin, gamma globulin, and other plasma proteins with important uses in research and clinical medicine.

The AHF concentrate is chemically stable and can be stored at refrigerator temperature for prolonged periods without loss of potency. Its high purity minimizes the risk of side reactions when it is administered to patients.

The concentrate will be manufactured for the Red Cross under contract as soon as remaining legal and logistical problems have been resolved. A license for this purpose was recently issued by the NIH Division of Biologics Standards.

It will be some time before the concentrate becomes available in quantity. However, the new precipitation technique will make quantity production of AHF feasible, enabling solution of the most difficult problems of hemophiliacs at reasonable cost.

Building for Minority Employment

Model *of 50 million dollar Children's Hospital and Child Guidance Center currently under construction in University City. Hospital will be built, on land leased long term from the City of Philadelphia (formerly occupied by two obsolete buildings belonging to Philadelphia General Hospital and adjacent to the Hospital of the University of Pennsylvania). The building will have nine floors and 288 beds. The hospital is the first construction project in the nation to receive a contract award under the Philadelphia Plan—an effort to increase minority employment in federally-assisted construction work.*

To Serve Snyder, Union, Northumberland

Home Health Headquarters Dedicated

Dedication ceremonies *were held last month for the Susquehanna Valley Home Health Services new headquarters in Shamokin Dam, Pa., with Congressman Herman T. Schneebeli (center) cutting the ribbon. The first federally funded project of its kind to reach operational phase is designed to provide health services and care for patients in their homes in Snyder, Union and Northumberland counties, including patients who require extended care but who are no longer in need of hospital treatment.*

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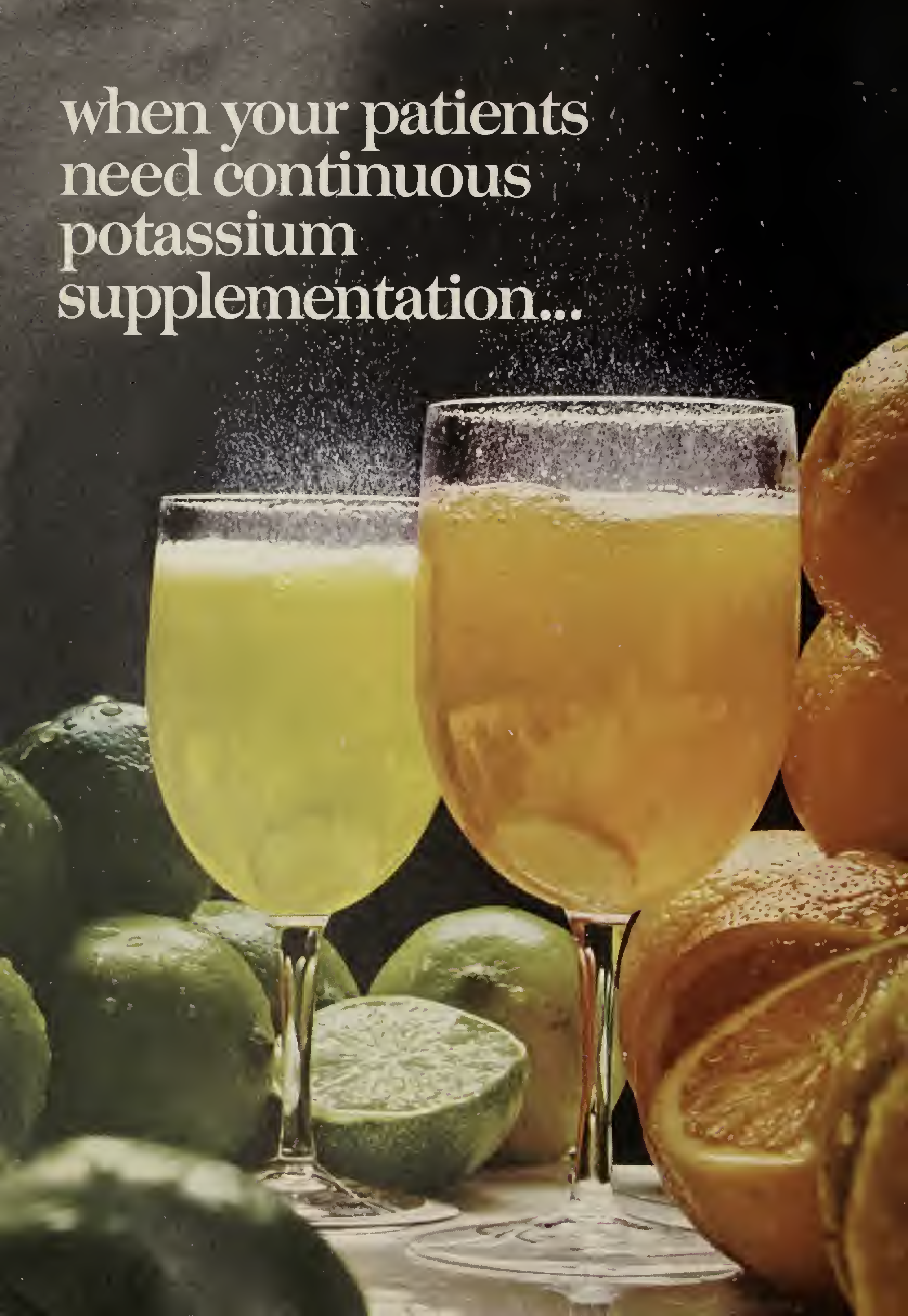
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Three clinical studies* confirm the effectiveness of good tasting K-Lyte as a source of supplemental potassium to increase low levels of serum potassium and to maintain normal levels. Patients were on continuous diuretic therapy and salt-restricted diets. K-Lyte dosage was one tablet b.i.d.

Serum Potassium Levels (in mEq./L)

Number of patients	Mean initial value	Mean final value
14	3.23	4.83
16	3.50	4.40
25	4.52	4.47

K-Lyte can offer effective potassium supplementation without the gastrointestinal complications sometimes associated with potassium chloride tablets and thiazide-potassium chloride combination therapy. Effervescent K-Lyte is taken in solution, speeding up absorption to avoid these hazards.

Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department, Mead Johnson Laboratories, Evansville, Indiana 47721

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LABORATORIES

close-up/MD's

Alexander M. Minno, M.D., of Pittsburgh, presented a paper, "Local Effects of Betamethasone," last October at the International Congress of Rheumatology at Prague, Czechoslovakia. Betamethasone is a drug used in arthritis. Dr. Minno is a clinical instructor of medicine at the University of Pittsburgh, staff of the Presbyterian-University Hospital, Allegheny General Hospital and the consulting rheumatologist at the Harmarville Rehabilitation Center.

Joseph G. Hinchcliffe, M.D., has been named medical director and Mr. Allen C. Miller has been named executive director of the Student Health Service that is responsible for the delivery of health care to over 15,000 students at the University of Pittsburgh. Announcement was made by Dan J. Macer, acting vice chancellor for the Schools of the Health Professions and Bernard J. Kobosky, assistant chancellor for student affairs. "The appointment of Dr. Hinchcliffe and Mr. Miller will provide for improved health services to Pitt students and permit the development of a more comprehensive, effective health program," they said. Dr. Hinchcliffe, who has served with the University's Staunton Clinic and was associate director of the Student Health Service, is a graduate of Holy Cross College and Georgetown University Medical School. He served a psychiatric residency at Pitt's Western Psychiatric Institute and Clinic.

The pilot continuing medical education project of Erie's Gannon College will be guided by a Physicians Continuing Education Planning Committee, which was appointed by the Erie County Medical Society. Members of the Planning Committee include: **Richard C. Lyons, M.D.,** chairman, **M. Lawrence Brockmyer, M.D., Arthur Calabrese, D.O., George J. D'Angelo, M.D., John J. Euliano, M.D., Gilbert Hartman, D.O., John F. Hartman, M.D., Richard H. Kuhn, M.D., Carl B. Lechner, M.D., Donald M. Schlabach, M.D., James F. Walker, M.D.,** and **E. Buist Wells, M.D., Robert O. Byers, M.D.,** president of the Erie County Medical Society, and **Joseph J. Namey, D.O.,** president of the Erie County Osteopathic Society, are serving, ex officio, as members of the planning committee.

Jack Strassman, M.D., *center, of Altoona received a fifteen-year service award recently from the Pennsylvania Department of Public Welfare in appreciation for his service as a medical consultant to the department's program for the blind and visually handicapped in the Altoona District. Frederick C. Lindberg, left, regional director of the Public Welfare Department's Altoona Region, presented the award to Dr. Strassman. Vincent J. Iacurto, right, manager of the Altoona District Office of the Bureau of the Visually and Physically Handicapped in the Department's Office of Family Services, looks on. Former chief of staff at Mercy Hospital, Altoona, Dr. Strassman is currently senior attending surgeon at the hospital. He is a fellow of the International College of Surgeons, a fellow of the American Society of Abdominal Surgeons and a fellow of the American Academy of Proctology.*

Jonathan E. Rhoads, M.D., noted surgeon and director of the Harrison Department of Surgical Research, School of Medicine, University of Pennsylvania, was named president of the American Cancer Society at its Annual Meeting at the Waldorf-Astoria Hotel. He served for the past year as vice-president and president-elect of the society.

Mayer A. Green, M.D., F.A.C.P., Pittsburgh, recently returned from the sixth annual tour of the National Allergy Seminar which included attendance at the Symposium on Clinical Immunology and Congress of the European Academy of Allergology in Geneva, Switzerland. Seminars were subsequently held in Copenhagen, and Stockholm, Sweden. The Seminar Group continued to Moscow and Leningrad where conferences were held at the First Biological Institute with Professors Ado and Kantchourine and at the Leningrad General and Pediatric Hospitals. The final seminars of this tour were conducted in London, England. Dr. Green conducted the session of the Allergy Committee of the American College of Chest Physicians in Chicago following his trip.

Thaddeus S. Danowski, M.D., professor of medicine at the University of Pittsburgh School of Medicine and chief-of-medicine at Magee-Womens Hospital, was invited by the British Diabetic Association and the British Paediatric Association to deliver the Twentieth Annual Banting Memorial Lecture. A well-known authority on diseases of the endocrine system, Dr. Danowski also participated in a panel discussion on diabetes mellitus sponsored by the same two organizations on October 4 in London.

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Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

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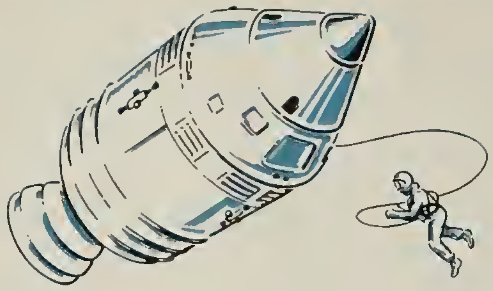

Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

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Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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close-up/MD's

Dr. Ake C. Hjalmarson of Göteborg, Sweden, has been named assistant professor of physiology in the College of Medicine at The Milton S. Hershey Medical Center of The Pennsylvania State University. Dr. Hjalmarson, 32, has been assistant professor of physiology at the University of Göteborg since receiving Licentiate of Medicine (equivalent to an M.D. in the U. S.) and Doctor of Medicine (Ph.D.) degrees there in 1968.

DR. SCHMUTZ

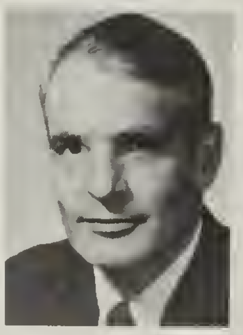
Donald A. Schmutz, M.D., has been appointed an associate in the department of radiology at the Geisinger Medical Center. For the past three years, he has been a resident in radiology at the Medical Center. A native of New York state and attained his medical degree at Cornell University Medical College. He served his internship at St. Luke's Hospital, New York City. During his residency training at Geisinger, he has specialized in radiation therapy and nuclear medicine.

J. Reed Babcock, M.D., a Bellefonte surgeon, has been elected chairman of the regional advisory group of the Susquehanna Valley Regional Medical Program for 1969–70. The Centre County physician was chosen for that post at the recent annual reorganizational meeting of the SVRMP's advisory body in Lemoyne. Other officers for 1969–70 include **Ellsworth R. Browneller, M.D.,** administrator of Geisinger Medical Center in Danville, vice-chairman; John F. Rineman, executive director of the Pennsylvania Medical Society, treasurer; and Richard B. McKenzie, director of SVRMP, secretary. Dr. Browneller will succeed Dr. Babcock as Chairman of the regional advisory group in November, 1970. **Raymond C. Grandon, M.D.,** of Harrisburg is immediate past chairman.

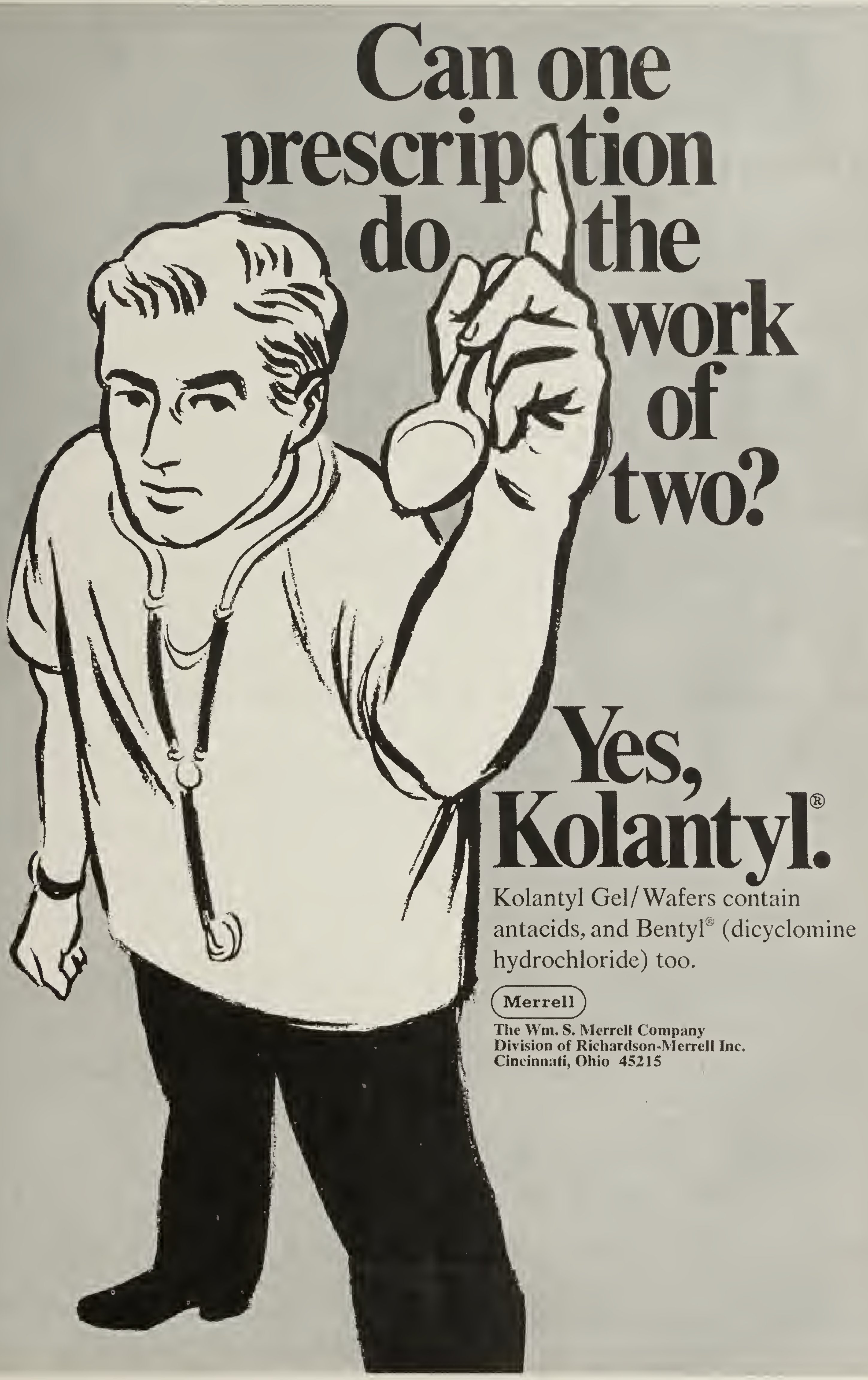
Contemplation *of 35 millimeter slide is shared by* **Harry Goldberg, M.D.** (*right*), *of Elkins Park, director of the cardiology section, Albert Einstein Medical Center, and director of the Women's League for Medical Research Heart-Lung-Kidney Laboratories at Einstein, and* **Fred K. Nakhjavan, M.D.,** *of Cheltenham, head of the cardiac hemodynamics laboratory. Einstein has received a five-year $275,000 renewal of a federal grant for its Training Program in Cardiovascular Physiology, directed by Dr. Goldberg. Another grant from the National Institutes of Health named Dr. Nakhjavan as principal investigator in a four-year study of "Coronary Circulation in Ischemic Hearts."*

Harry E. Bacon, M.D., Philadelphia, was a speaker at the Pan Pacific Surgical Association in Honolulu, his subject being, "Adequate Resection for Colonic Carcinoma." He also moderated a panel on "Intestinal Fistula" at the Northeastern Proctologic meeting in Atlantic City and received the distinguished service award; moderated a panel on "Surgical Management of Diseases of the Large Bowel" at the American Academy of Osteopathic Surgeons in Chicago and was guest speaker at the Massachusetts Chapter of the American Cancer Society in Boston.

Muscular dystrophy, a progressively crippling disease which strikes mostly children from 3 to 13 years old is a focal point of research being conducted by **George J. Kaldor, M.D.** His recent promotion to professor of physiology and biophysics at Woman's Medical College of Pennsylvania was announced by Edward J. Masoro, Ph.D., professor and chairman of the Department.


DR. WALDHAUSEN

A specialist in cardiopulmonary surgery who has made significant advancements to the management of congenital heart disease has been appointed professor and chairman of surgery at The Milton S. Hershey Medical Center of The Pennsylvania State University. The appointment of **John A. Waldhausen, M.D.,** was announced today by **George T. Harrell, M.D.,** dean and director at Hershey. Since 1966 Dr. Waldhausen has been associate professor of surgery at the University of Pennsylvania School of Medicine and associate director of its clinical cardiovascular research center.



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These M.D.'s have joined the State Society in recent months:

BUCKS COUNTY:

David S. Grab, M.D., 567 Snowball Drive, Levittown 19056.

Joseph F. X. McGarvey, M.D., 60 E. Court St., Doylestown 18901.

Ronald B. Pitkow, M.D., 8117 Hawthorne Lane, Elkins Park 19117.

Roberto Rendon, M.D., The Woods Schools, Langhorne 19047.

Robert H. Spratt, M.D., 44 Cameron Rd., Huntingdon Valley 19006.

Ewing W. Tibbels, Jr., M.D., 332 Brendwood Dr., Langhorne 19047.

DAUPHIN COUNTY:

Robert C. Gilroy, M.D., Harrisburg Polyclinic Hospital, Harrisburg 17110.

Clement H. Kreider, Jr., M.D., 1625 N. Front St., Harrisburg 17102.

Arthur F. Kreig, M.D., Hershey Medical Center, Hershey 17033.

Joseph A. Ricci, M.D., 1919 N. Front St., Harrisburg 17102.

DELAWARE COUNTY:

William R. Beckwith, M.D., 2245 Garrett Rd., Drexel Hill 19026.

Harte C. Crow, M.D., Hospital of the University of Pennsylvania, Philadelphia 19104.

Erika F. Parisi, M.D., 633 Chilos Ave., Drexel Hill 19026.

Harold B. Prentiss, M.D., 117 Chester Rd., Swarthmore 19081.

Harold C. Scheaffer, M.D., 2615 Kirk Ave., Broomall 19008.

Miklos Sugar, M.D., 782 Louise Dr., Springfield 19064.

LACKAWANNA COUNTY:

Dana D. Cox, M.D., Scranton State General Hospital, Scranton 18501.

LAWRENCE COUNTY:

Thomas W. Bashara, M.D., 15 W. Reynolds St., New Castle 16101.

Rafael Tranopolsky, M.D., 708 N. Jefferson St., New Castle 16101.

MONTGOMERY COUNTY:

Richard L. Mayes, M.D., 1670 Skippack Pike, Center Square 19422.

VENANGO COUNTY:

Selim A. Elias, M.D., 1228 Elk St., Franklin 16323.

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PENNSYLVANIA MEDICINE special report

Organ Transplantation

The interests of the Pennsylvania Medical Society in the transplantation of organs from one human to another or from a lower specie to man is a valid one, and the membership should be completely advised of the current state of the art, and the availability of such services for either prospective donors or recipients. This will enable members to properly advise their patients.

The attitude of the Society must reflect the scientific community's viewpoints, and coincide with guidelines promulgated by the AMA. For procedures where immunosuppression is not needed, appropriate specialty boards and appropriate specialty societies govern the practice. Here the Society can contribute by pointing out where potential recipients or donors might be referred.

On the other hand, the Society feels an obligation to suggest to its membership, through the medium of the Council on Education and Science,

a. that the transplantation of organs should be performed only in such institutions which have on their staff the scientific potential and equipment to assume all of the obligations of such an activity,

b. that there be available to such teams, experts in the field of immunology as well as specialists in the field of the organs which are to be transplanted; i.e., nephrologists where renal transplants are to be undertaken, cardiac catheter specialists and cardioradiologists where heart transplants are to be undertaken, etc.,

c. that there be sufficient support equipment available such as extra-corporeal circulation or renal dialysis equipment with experienced technical help to employ and maintain this equipment, as well as sufficient backup equipment to prevent hazard from equipment failure.

Prepared by the Council on Education and Science
Adopted by the Board of Trustees of the Pennsylvania Medical Society

Sensitivity Training and T-Groups

We present here below an important word of caution from our COMMISSION ON MENTAL HEALTH which is of possible importance to all physicians. It seems that, in addition to contaminating our earth, its waters and its atmosphere, we are also able to disturb our emotional and intellectual milieu. If the amount of writing in newspapers and magazines is an index of the amount of "sensitivity training" (which is done in "T-Groups") which is going on among our fellow citizens, the growth is startling.

The object of this group interaction is to help the participants become more sensitive to themselves and to the people around them. Such groups are sponsored by all manner of private and public organizations. Severe psychologic reactions can come from participation in such "a relatively unstructured group,"[1] especially by "individuals who consider themselves in need of psychiatric treatment."[2]

The Statement of the Commission follows:

The Commission on Mental Health of the Pennsylvania Medical Society thoroughly endorses the following statement and wishes to bring it to the attention of the membership.

"A 'Sensitivity Training' statement is issued by American Medical Association Council on Mental Health in response to several inquiries: "Although sensitivity training is an issue of current concern, it is not an accepted part of medical practice. The Council on Mental Health of the AMA believes that the procedures employed are not well enough defined to lend themselves to objective evaluation. It urges that particular caution be taken against participating in sessions conducted by leaders who are not professionally trained and qualified, in view of reports of psychotic and neurotic sequelae. Physicians have the responsibility of pointing out these possible dangers to persons who are interested in becoming involved in these programs."

Paul J. Poinsard, M.D., Chairman
PMS Commission on Mental Health

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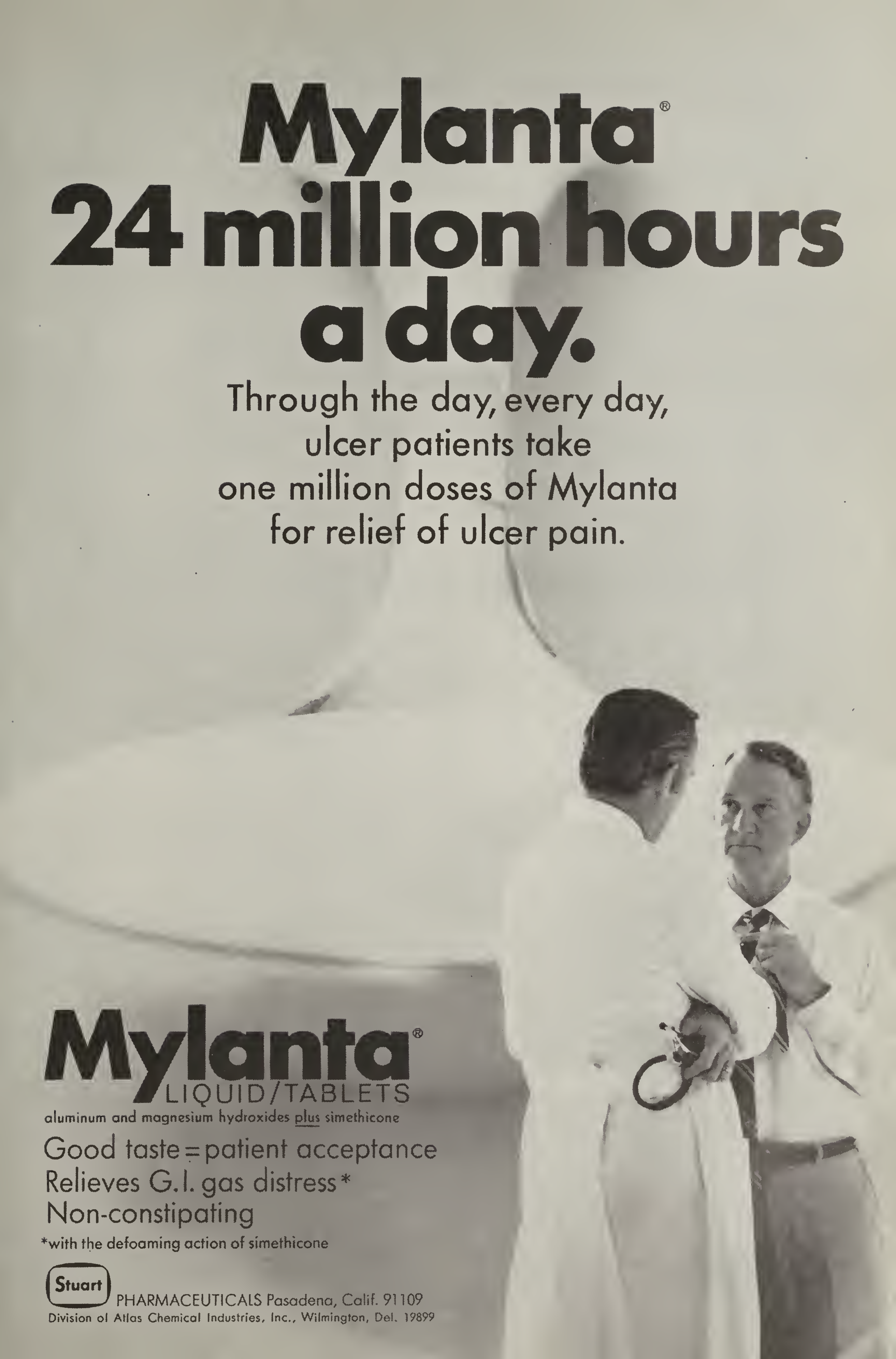
1. Editorial, JAMA 210: 719 Oct. 27, 1969
2. Jaffe, Steven L. and Scherl, Donald J.: Acute Psychosis Precipitated by T-Group Experiences. Arch Gen. Psychiatry 21: 443–448, Oct. 1969



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special report

Final Report of the Philadelphia County Committee to Study the Future of the Private Practice of Medicine

After a year and a half of deliberation spent largely in interviewing non-medical people from a wide variety of walks of life as well as physicians in full-time employ, physicians in private practice, and physicians still serving their residency the Committee came to the conclusion that it was developing no new material. All of the information which it was receiving from these sources had already been well-documented and reported elsewhere many times. It therefore seemed to the Committee hat, if the report was to serve any useful purpose it would be he form of the report rather than its content which would serve his function. The report follows:

And it came to pass in the days of the rule of the great omniscient bifacial King Janus, that scanning past and future simultaneously, seeing a full 360° at a single whirl of his radar, his senses brought him only the din of discontent, and the sounds of sickness, and the smells of pollution, and the outcries of protest, and the ferment of the witches' cauldron. And he sought in his Computer a likely candidate for the role of Scapegoat. He prayed to the Mighty Machine "O, Supreme Being send me that one who is prosperous from the sale of an unpopular product. Deliver unto me that one who is few among us so that his voice may be shouted down. Point out that one whose labors are dedicated to the false gods of selfless devotion in a constant battle where defeat is assured. Select from the multitude that man whose earned fatigue leaves him too weary to defend himself. Make known to me the man whose skills and education are the envy of all. Delivery unto me that one who asks only honest wages for honest work. This one will we crown with goat horns and clothe with goatskin that all may gather and heap their sins upon him to drive him into the desert and thus be sinless themselves."

And the Great Machine whirred and flashed and with not even a puff of smoke delivered to Janus a card bearing the legend "Doctor." And "Doctor" was made to build his own cage out of beams of benefaction and posts of pity and the wire of work. And they put upon him the horns of The Billy and the hide of The Nanny.

And Janus sent The Word to the multitude. "We have found the source of your sorrows. Come heap your sins upon him that ye may now be free of thy burdens and walk upright in the swamp. Ye know that this is the purveyor of health and ye are not healthy. Ye know that he is prosperous and ye are poor. Ye know he lives in a clean house and thine is filthy. I, Janus, now deliver him to thee for thy salvation."

And Carpenter came and cursed him for the poor housing that causes disease; and Electrician lashed him for the darkness that depressed the poor; and Plumber laid on the thorns for the lack of sanitation; and Contractor beat him for the high cost of hospitals; and Administrator scourged him for not wishing to be a hireling; and the Young Tribesmen with shiny stethoscopes and springy steps and upright T-waves, their nostrils not yet filled with the odors of pus and their bones not yet weary with trying, added their sophomoric scorn to his burdens. And the people shouted "We will not pay for Disease" and Doctor wept that they knew not that his product was the minimizing of disease and distress, not their occurrence. And there marched into the courtyard a great group of white coated men—all of whom had already given up all that Doctor had been trying to do: to conquer disease through strength of will, the use of practical knowledge, and devotion to The Worshipful Work. And they spat upon him for his failure to have regular days off. They ridiculed his inability to have tax-dodges and retirement benefits. They beat him for giving good medical care at reasonable cost. They said "We, The Group Practitioners, do it better and cheaper and easier. Our machines will point the way to health and salvation." And they said it so often and so loud and with such conviction that the multitude said that it must be so, for these people wear clean white coats and starched collars and show no signs of having been up all night and bear not the stains and dishevelment of fatigue—and they speak from high places. And Politician heaped upon his head the coals of bad laws and racial prejudice and smeared his face with his own blood that the flies might come to add to his discomfort.

And through the murk of the mid-watch Nurse came with water and Patient brought bread.

And when all had had their turn they drove him into the desert pursued by the triumphant howls of his tormentors. And he dwelt in an Oasis of Sorrow and survived on the figs of frustration at being forced to witness the defeat of the Profession and witness the disintegration of the ideals which had been its birthright.

And there was a festival lasting 100 days and 100 nights in which Carpenter and Electrician and Plumber and Contractor and Administrator and the young tribesmen and The Groupers and Politicians and all The People made a joyful noise with tinkling cymbals and sounding brass.

And suddenly Fear arrived at The Festival and, seeking the highest podium and the brightest torch, said: "Hear ye. Ye have said ye need more doctors. Ye have given him his reward. Who now will be a Doctor? Ye Carpenter, ye Politician, ye Financier, will you deliver your sons to The Schools so that they may study and labor to become a Doctor?"

And a thunderous silence fell upon the multitude and each looked agape at his neighbors, half pleading and half questing. And then each drifted away to meditate on this malice.

And they sent representatives into the desert to seek out The Doctor but beneath the sands of The Oasis, beneath the barren Fig Tree they found only a dried skeleton and from the branches of The Tree came the flapping of vultures wings.

PERRY S. MACNEAL, M.D., Chairman
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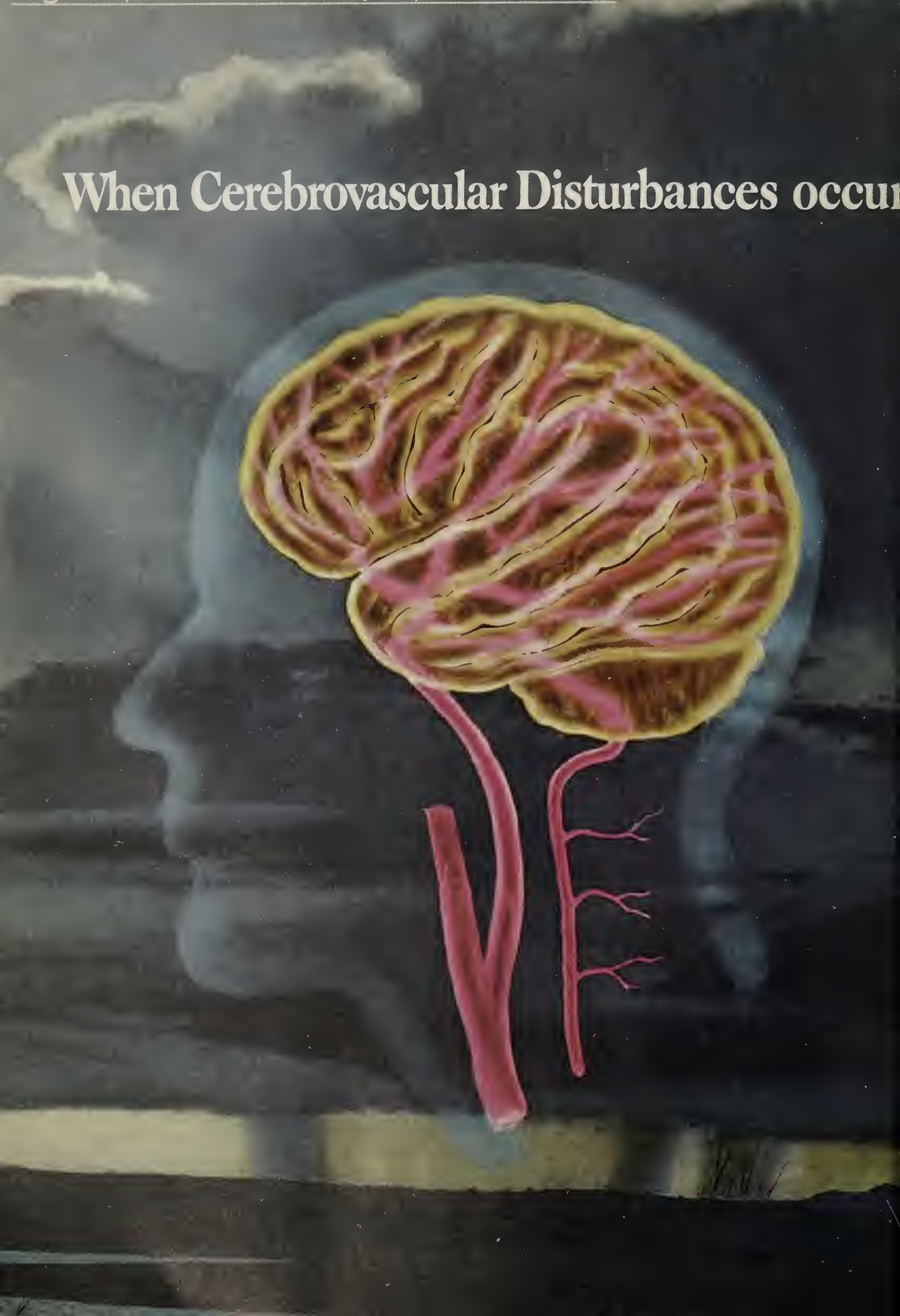

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or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete
ils available in product brochure from Mead Johnson Laboratories **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut,
., and Savarese, C. J.: Angiology *15:*No. 2 (Feb.) 1964. (2) Horton, G E., and Johnson, P C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson,
and LePere, D M · Angiology *11*:190-192 (June) 1960 (4) Dhrymiotis, A D , and Whittier, J R.: Current Therapeutic Research *4*:124-128 (April)
(5) Whittier, J R.: Angiology *15*:82-87 (Feb) 1964

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A Noteworthy Review

For more than a decade, your editorial staff has been making attempts to provide reviews of various aspects of clinical medicine. Success has not been noteworthy. The conclusion may be drawn that it is far from common to find the talent to produce such reviews. There are many failings in the specimens submitted. Most common is the attempt to be so exhaustive and so "scientific" that the goal of clinical usefulness is lost.

In this issue we present a fine example of what we have been seeking. Our example is a review of the therapy of cerebral edema by administration of adrenal corticosteroids. It is directed to those of us outside the field of neurology and neurosurgery. It emphasizes the use of these drugs in post-operative edema and in cerebral edema accompanying cerebral metastases as well as primary brain tumor. Use in head injury with edema is particularly interesting. Although valuable in benign intracranial hypertension, "the administration of adrenal corticosteroids for the therapy of cerebral edema resulting from cerebral vascular accidents is less well established". But—see page 50 for a rewarding reading experience.

CBL

Guest Editorial

Should the Kettle Call the Pot Black?

This evening in countless homes, clubs, bars and other gathering places the main topic of conversation will be POT. The Hards and the Softs will polarize out of the swirl and heat of argument spurred on by sips of coffee, beer and highball and wreathed in rich tobacco smoke.

There is an irony of history in this that should not escape us as we weigh the consequences of either the unrestricted use of marijuana or, under present laws, its utter proscription.

Tobacco literally sent Europe up in smoke in the early Sixteenth Century, to the accompaniment of much controversy as to its beneficial or noxious capacities. For a while, and mainly because of fire hazards, Russian noses were sliced off, Catholic souls excommunicated, Mohammedan necks stretched and Viennese shot on sight—all for puffing on the wicked weed.

Righteous force producing no lesser air pollution and instead only a spotty depletion of their citizen-taxpayers, kings and countries shrewdly went instead into the tobacco business on a monopolistic and highly profitable scale. Medical inquiry and hubbub promptly declined, not to appear again until tobacco was once more a matter of private enterprise and a threat to the integrity of lungs and television programs.

Coffee drowned Europe a little earlier via a Mohammedan Arabia where, for a while, the coffee clatsch was rewarded with bobbed lips, a gone nose or worse. In Europe there were national bans and suppression, again to the tune of wild medical controversy. Neither kept the people of many nations from making this drug the most popular drink of the Western world.

For alcoholic beverages the saddest story is so recent as to need no telling: a nation deprived of the freedom to become educated in the rational use of the fruit of the vine and its generations hooked on the unsubtle enticements of its lowest common denominator—raw alcohol; a nation weakened, even to this day, by the unhealthy alliance between criminal elements and a rebellious people; a nation still unable to define and deal with the problem of alcoholism in a rational way.

This is NOT to say that marijuana is no worse than coffee or tobacco, no more damaging than alcohol. At this point in time we simply do not have the necessary data, particularly about its long-term effects. Until we can truly come to know more about marijuana, either harsh legal penalties imposed upon the user or its unrestricted sale and distribution seem equally foolish.

No doubt the strict and lasting penalty is well suited for those who would traffic in and profit by the illicit handling of the drug. The lessons of alcohol do teach us that. But, to brand the user a felon and to classify him foreverafter as criminal, smacks of nose-bobbing and neck-stretching. From the standpoint of medical science, the damage is as great; no sound clinical and epidemiological studies can be made if the law drives the problem underground.

The relevance of the historical context is this: harsh and punitive laws have not served in the past to keep

(*Continued on Page 43.*)

Painful night leg cramps...

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One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

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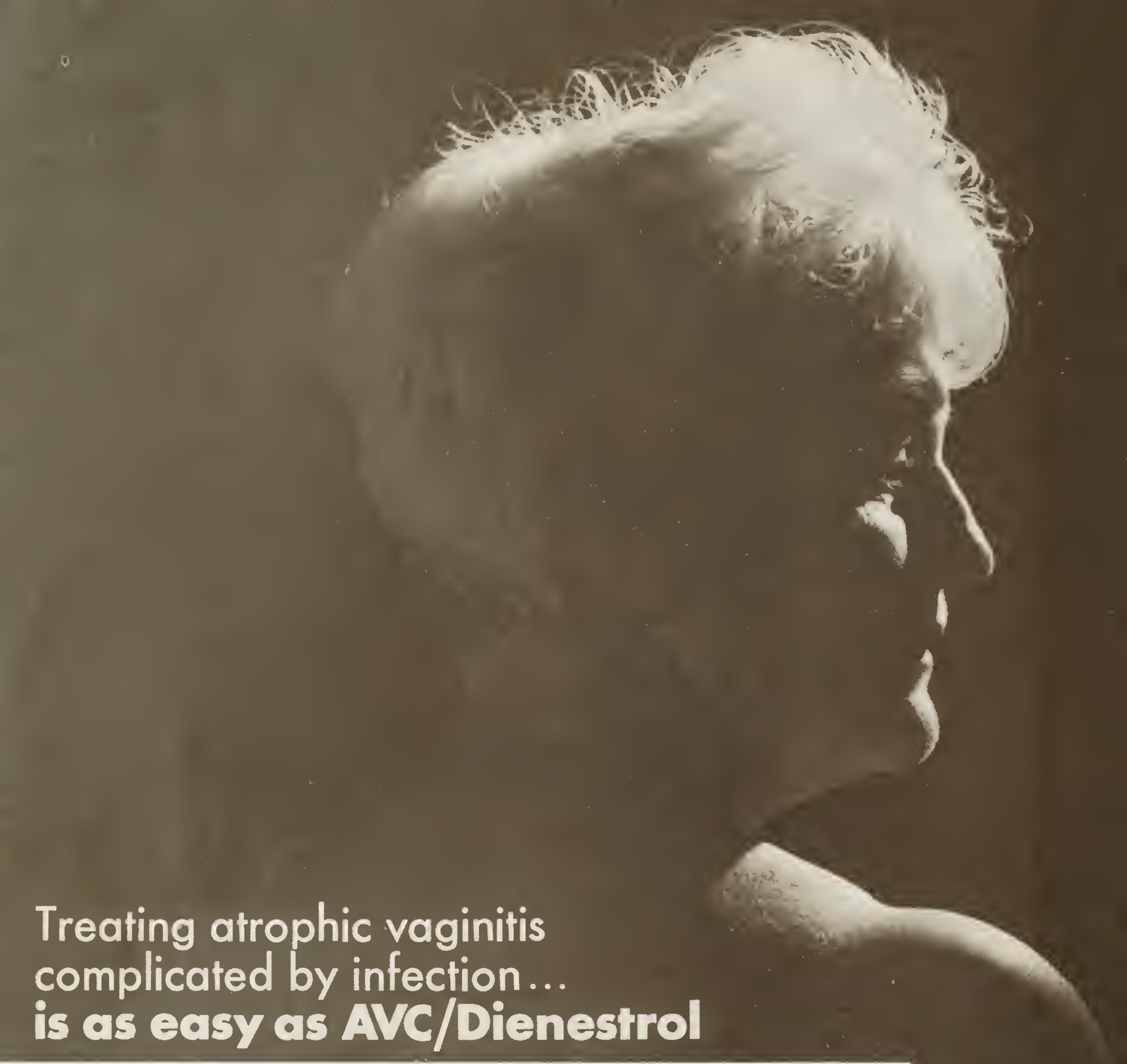

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References: (1) Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. (2) Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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Continued/page 40.

large numbers of people from doing what they come to feel is their right, whether it is judged good for them or not. And loud blatherings from medicine, especially when not based on rational evidence, have precious little effect. Bad laws can make for bad medicine when penalties and threats distort the problem or drive it out of sight and away from dispassionate medical scrutiny.

Medicine must resist the easy stance of claque to popular opinion. We must question and protest the continuance of the present "hard" legislation. Whatever value and position of trust physicians yet enjoy will continue to be won by insistence on a commitment to honest inquiry and to the value of educating people to be party to their own destiny.

James T. McLaughlin, M.D.
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The Joy of Working

More than 10,000 boys and girls leave high school each year either as graduates or dropouts and enter the job market inadequately prepared in terms of education or work experience.

Twenty-three of the largest non-profit groups serving the Philadelphia area, with the wholehearted co-sponsorship of the Pennsylvania Medical Society, have joined forces to work out a program which would provide such youths with part-time after school work from the age of 15 years.

The objective of the twenty-three sponsors of the program, known as Job Opportunities for Youth (JOY), is to help needy youngsters still in school to obtain meaningful employment experiences which will better prepare them to start promising careers. The sponsors are seeking part-time and weekend employment for approximately ten hours per week at $1.60 per hour.

The appeal is out to non-profit organizations, to businesses employing fewer than twenty-five persons and to professional groups such as physicians, to employ at least one needy boy or girl for the thirty-seven weeks of the school year for approximately ten hours per week. Of course, employment for shorter periods also is most welcome.

Physicians of the Pennsylvania Medical Society can help in one of two ways—by employing one needy boy or girl after school or on Saturday, or by contributing any amount for work scholarships. Each of the hospitals and community health centers could use extra help if part or whole work scholarships were made available. Several hospitals have already appealed to JOY either to provide full salary at $1.60 per hour or to share the cost by providing eighty cents per hour.

Workers are selected by the public and diocesan school systems from low and moderate income families in an attempt to meet the specifications set by the employer for meaningful work that is supervised by an individual who understands and believes in the objective of the program.

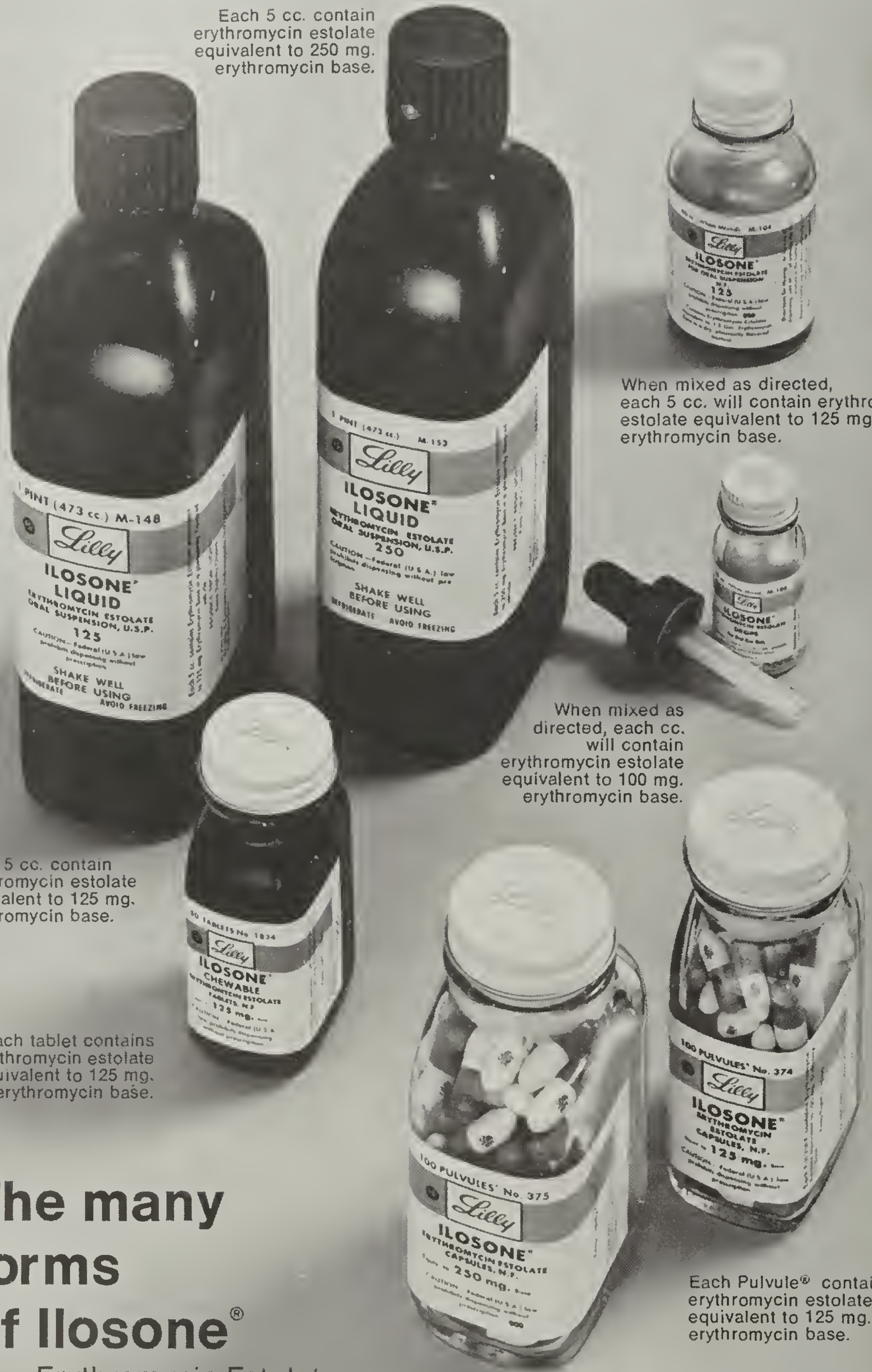
All contributions for work scholarships are tax deductible and may be made in any amount. A full work scholarship for the thirty-seven-week school period is $592.00. Donors may specify the non-profit institution or program to receive the scholarship.

All expenses for operating the program are borne by the Fellowship Commission, the parent organization to JOY, so that contributions for work scholarships are used exclusively for that purpose with no part going to overhead.

Pennsylvania "docs" interested in participating in the JOY program should contact Mrs. Lewis C. Scheffey, Chairman, JOY, or H. Louis Evert, Staff Assistant, Fellowship Commission, 260 S. Fifteenth Street, Philadelphia 19102. Telephone (215) KI 6-7600.

There are thousands of physicians in the Commonwealth who can make an invaluable contribution to the motivation, self-confidence, skills and faith found in the American system by providing part-time, after school work scholarships for youngsters—many of whom can be exposed to the wide range of occupations in the critically shorthanded health field.

Provide the JOY of meaningful work to a youngster today!



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The Current Management of PARANASAL SINUSITIS

ERNEST L. McKENNA, JR., M.D.
Wayne

Vigorous, accurate and rational treatment of a patient with an acute sinus infection will affect a cure almost immediately. Failure to obtain a cure will result in a lingering subacute phase and its sequela, chronic infection.

The most common form of sinusitis encountered is an acute suppurative process following an acute inflammation of the upper respiratory tract, usually a common cold. The paranasal sinuses being cavities lined with a glandular type of epithelium, are logical depots for the collection of normal secretions. The pooling of secretions due to obstruction of the sinus ostae, establishes a perfect media for proliferation of bacteria. The resulting pus, which attempts to drain itself, but frequently becomes loculated, can be evacuated by local therapy in the nose.

Generally speaking, the diagnosis of sinusitis, whether it be localized to one or more or all of the sinuses, is not difficult. The history of a preceding upper respiratory infection or allergic state and the finding of pus on examination of the nasal cavity make for a rather obvious conclusion. In addition, the usual manifestations of the toxic state such as fever, malaise, swelling in the local area and tenderness over the effected sinuses are confirmatory evidences of an acute infection. Transillumination of the sinuses and radiological examination are mandatory if there is any uncertainty or question of the diagnosis.

It should be noted that headaches of all types and origins are frequently attributed by the lay-patient to sinusitis. It is also not uncommon for patients to have followed up this self diagnosis and begun treating themselves with a variety of proprietary medications available to them without prescription.

The role of allergy in paranasal sinusitis and rhinitis cannot be dispensed with lightly. These agents must be recognized by history and proven by skin testing so that proper desensitization may be carried out. If allergy is the underlying mechanism and is ignored in the therapeutic regime, a failure usually ensues. A corollary to this is that the lessening incidence of chronic sinusitis is probably due to an increased recognition and subsequent treatment of the allergic state.

The modern management of acute suppurative sinusitis is twofold. The first is the use of antibiotics or chemotherapeutics in therapeutic doses and over a concerted period of time. The second is local therapy to increase the ventilation and allow for drainage of the sinus cavities. In the past it has been recommended that isotonic local solutions such as one-half to one per cent ephedrine, one-quarter or one-half per cent Neo-synephrine, and the like, be used to shrink the mucous membranes. More recently, medication has been used to facilitate this ventilation and shrinkage.

Our choice of antibiotics is usually penicillin as the initial course of treatment in those who are not sensitive to the drug. It is our feeling that intramuscular penicillin in most cases of sinusitis is not necessary and we use penicillin buffered tablets, 400,000 units Q.I.D. or the newer broad spectrum penicillins over a period of not less than seven days, as an empirical choice of dosage in the adult patient. The dosage for children is proportionately less. In those sensitive to penicillin or who have not had a response to this drug, another antibiotic is chosen but usually a culture is done and bacteriologic diagnosis and specific antibiotic information obtained.

The second phase of the therapy, namely shrinkage, is performed on the first visit in the office in an effort to, first, diagnose and, second, ventilate the paranasal sinus areas. Shrinking the mucous membrane of the nose, especially the middle meatus area, with 1 per cent ephedrine spray and cotton packs, if the nose is unusually boggy is effective. Shrinkage is continued by the use of systemic vaso-constrictor drugs such as pseudoephedrine or phenylephrine which are obtainable in a number of proprietary medications. In addition, antihistamines are used where a positive history is obtainable and empirically in seasons of a high incidence of pollinosis such as early spring and late summer. The decongestant effect in infants is more safely obtained initially with Neo-synephrine, one-quarter per cent drops or spray, but oral decongestants are certainly safe beyond the infant period. The treatment of subjective complaints such as fever, headache and malaise is usually easily managed with aspirin. Occasionally the pain may be so severe as to require a moderate dose of narcotics to control the distress until the therapeutic measures noted above become effective.

The management of chronic sinusitis is not so simple. Tissue changes in the mucosa have developed to a degree that is almost irreversible. Frequently polyps are present both in the nose and in the sinuses. They must be removed if they obstruct the normal channels of mucous drainage and nasal ventilation. Superimposed acute infection and basic allergy are managed as above. The habit of excessive smoking should be curbed. Little, if any, local treatment to the nose is helpful. The antral window technique with periodic irrigation is extremely helpful in chronic maxillary sinusitis. This is performed under local anesthesia by making an opening below the inferior turbinate into the maxillary sinus chamber. A catheter may then be inserted without undue trauma into the sinus and the sinus irrigated frequently. A more advanced procedure in chronic sinusitis consists of the Caldwell-Luc operation which is done by making a window through the canine fossa into the inferior meatus, and entering the sinus over the canine tooth on the involved side. The affected mucous membrane is completely stripped from the sinus and all abnormal tissue such as polyps cleaned out. Internasal ethmoidectomy and ethmoid-sphenoidectomy are occasionally necessary to remove marked hypertrophic chronically infected mucosa and polyps occupying the nasal vault and the sinuses.

The therapeutic problem of chronic sinusitis, as it usually presents itself, is the choice of action to pursue; should we attempt protracted conservative medical therapy or should we go right to the surgical procedures mentioned above?

Nasal cripples were frequently created by gutting operations on the sinuses. It is also well known that regrowth of chronically infected mucous membrane may occur after radical surgery with persistence of the patient's difficulties. The current feeling is that there is rarely any hazard in waiting and it is worth while to make the patient fairly comfortable. Conservative management is, therefore, the usual course. If improvement does not occur then limited surgical procedures should be done to correct the pathologic state. Results in the treatment of patients with chronic sinusitis are generally only partly satisfactory as opposed to the acute sinus infections which almost always end in a happy result.

Important in any discussion of chronic infection in the sinuses, is the situation in which chronic progressive nasal obstruction persists despite treatment and with associated facial pain and/or swelling. Under these circumstances, and indeed under any circumstances where our therapy is not successful, immediate x-ray examination must be secured to rule out the possibility of a neoplastic disease in the sinuses or the nose. Frequently sinus malignancies are seen first because of the complaint of an acute infection.

Summary

A survey of the diagnosis and treatment of acute and chronic infection of the paranasal sinuses is presented.

Acute infection is handled readily with the use of adequate antibiotics and antihistamines as indicated by a history or clinical suspicion of allergy. Continued shrinkage, preferably with systemic medications, is absolutely necessary to provide constant drainage for purulent material.

Chronic sinus disease is more difficult to manage. Efforts to restore normal nasal physiology, medically and/or surgically tend to greatly improve the physical state of the patient. These methods are reviewed. Malignancy in acute and chronic infection of the sinuses must be kept in mind.

Dr. McKenna is chief of the department of otolaryngology at Bryn Mawr Hospital. He had been instructor in otolaryngology at Temple University School of Medicine.

REFERENCES

1. Hansel, F. K.: *Clinical Allergy*, St. Louis, C. V. Mosby Co., 1953.

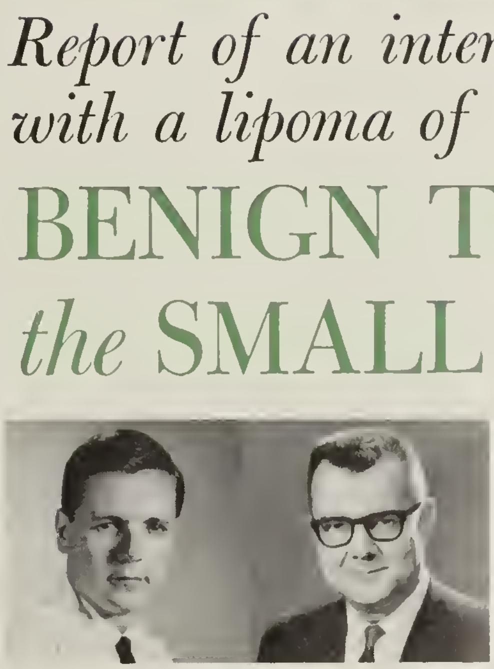
2. Weiller, F. L.: *Present Day Management of Sinus Disease.* Transaction of Pennsylvania Academy of Ophthalmology and Otolaryngology, Vol. 18, #2, 1966.

3. Hempstead, B. E.: *End Results of Intranasal Operation for Maxillary Sinusitis.* Arch Otolaryngology 30: 711, 1939.

4. Tabb, Harold G.: *Carcinoma of the Antrum and Analysis of Sixty Cases with Special Reference to Primary Surgical Extirpation.* Laryngoscope 67: 269, 1957.

Report of an interesting patient with a lipoma of the duodenum

BENIGN TUMORS *of the* SMALL INTESTINE



R. C. EYERLY, M.D.
WILLIAM F. HALLAHAN, M.D.
Danville

When a physician is confronted with a patient with unexplained anemia, a history of gastrointestinal bleeding, and hemoccult positive stool examinations, he must be cognizant of the fact that a small bowel neoplasm may be the source of the symptoms. A patient with a lipoma of the duodenum is discussed, and eight patients with benign tumors of the small bowel have been added to a previously reported series.

The first patient with a benign tumor of the duodenum was reported by Cruveilhier in 1835. In 1956, Rivers and his associates[1] reviewed the world literature and found reports concerning 1,399 benign small intestinal tumors of which 211 were benign tumors of the duodenum. Fifteen additional patients with benign tumors of the small intestine were reported by Knoernschild[2] in 1962 and three out of seven in the duodenum were found to be lipomas. The incidence of benign tumors of the small intestine is approximately 0.16 per cent of all neoplasms. In Rivers' review, 75 per cent of all benign duodenal tumors were found to be one of four histologic types: (1) adenoma (35 per cent), (2) lipomas (16 per cent), (3) myomas (15 per cent), and (4) polyps (9 per cent). In addition to these usual varieties of duodenal tumors, there have been a number of unusual ones reported, such as: ganglioneuroma, nonchromaffin paraganglioma, and a Zollinger-Ellison tumor.[3–8] Braasch and his associates[8] reported thirty-five different tumor types that have actually been found in the duodenum. Serrano[9] reported the experience with primary tumors of the duodenum at Memorial Hospital in New York City for a sixteen-year period ending in 1962. He found nine benign and twenty-two malignant tumors and of the latter group, only two survived five years and over one-half were unresectable at the time of surgery.

The experience at the Geisinger Medical Center with tumors of the small bowel from 1923 through 1957 has been reported by Krouse and his colleagues.[10] To their total of thirty-six patients, twenty-four with benign tumors and twelve with malignant tumors, eight additional patients with benign tumors have been documented (Table 1). The last patient has been interesting because the diagnosis was not made until his fifth admission three and one-half years after the onset of his first episode of gastrointestinal bleeding.

Case Report

The patient (GMC 24 27 91), a 51-year-old dairy salesman was in good health until September, 1964, when he was admitted to the Geisinger Medical Center with the complaints of intermittent diarrhea and dark stools for two months' duration. His physical examination was normal except for hemoccult positive stool. The laboratory studies revealed a hemoglobin of 14.0 gm./100 ml. and hematocrit of 46 per cent. A small bowel x-ray series revealed a jejunal diverticulum. Proctoscopic and barium enema examinations were normal. He was discharged with the diagnosis of irritable bowel syndrome and jejunal diverticulum.

His second and third admissions were in April, 1966, and February, 1967, again for complaints of black, tarry bowel movements. A repeat barium meal x-ray outlining the stomach and small bowel was unrewarding except for heavy rugal folds in the stomach. Barium enemas and proctoscopic examinations which were performed during these two admissions were negative. The fourth admission, in February of 1967, one week later, was for dark red rectal bleeding of two days' duration. A gastroscopy was performed at this time, and the gastroscopist's diagnosis was chronic superficial gastritis of the body of the stomach. He was discharged with a hemoglobin of 12.5 gm./100 ml. four days later.

His fifth and final admission was in February, 1968, for complaints of tarry bowel movements for two days' duration. At no time during the course of his illness did he complain of pain or symptoms suggestive of obstruction. Physical examination revealed only hemoccult positive stool. His hemoglobin was 11.0 gm./100 ml. and hematocrit was 31.5 per cent. At this time, the stomach and duodenal x-ray study revealed a soft, benign-looking tumor in the descending duodenum, which, in retrospect, was present on previous studies, but hidden in the mucosal pattern of the duodenum. He was operated on one week after admission, and a duodenal polypoid mass with an apical ulcer was resected from the descending duodenum (Figure 1). The pathological report was that of a pedunculated submucosal lipoma of the duodenum with ulceration of the apex (Figure 2).

TABLE 1
BENIGN TUMORS OF THE SMALL BOWEL
TREATED AT
THE GEISINGER MEDICAL CENTER
BETWEEN 1958 AND 1967

Type of Tumor	*Number*	*Location*		
		Duodenum	*Jejunum*	*Ileum*
Leiomyoma	2			2
Lipoma	3*	2		1
Fibroma	1			1
Lymphangioma	1			1
Unidentified tumors (unresected)	1	1		

* Including the case report

He received two units of blood during the first three days postoperatively and was discharged ten days after surgery with a hemoglobin of 12.8 gm./100 ml.

He has been seen since his discharge from the hospital and has had no complaints and his hemoglobin was 14.5 gm./100 ml.

We believe this tumor, and not the jejunal diverticulum, was the cause of this patient's gastrointestinal bleeding.

Discussion

Benign tumors of the duodenum are usually small and are often asymptomatic. When symptoms occur, they usually are the result of intussusception or intraluminal bleeding. Intussusception may cause subacute obstruction with intermittent attacks of abdominal pain or complete obstruction may occur. Occasionally a benign duodenal tumor will present as a palpable abdominal mass.[12]

The most common forms of duodenal tumors are adenomatous polyps, lipomas, leiomyomas and hemangiomas. A common metastatic lesion to the small bowel which may simulate a benign lesion roentgenographically, as an intraluminal but extramucosal defect, is from a malignant melanoma as reported by dasGupta and his associates.[12] When several lesions, one to four cm. in size, are present throughout the small bowel, one should consider a diagnosis of malignant melanoma, Kaposi's sarcoma, or the Peutz-Jegher's syndrome as suggested by Haskin.[13]

Lipoma is the second most common benign tumor of the duodenum as reported in a large series collected from the literature.[1] They tend to be avascular and usually arise from the submucosal or subserosal areolar tissue. Approximately 85 per cent occur as intraluminal growths with mucosa remaining intact over the tumor. Occasionally they may become pedunculated and have been known to cause intussusception or break off and cause intestinal obstruction. A mass was palpable in one-fourth of the patients collected by Rivers[1] and an ulcer-like syndrome may occur resulting in massive hemorrhage.[3] Only about one-fifth of the patients reviewed by Comfort[14] had any symptoms associated with submucosal lipomata of the gastrointestinal tract.

The additional eight patients with benign tumors of the small intestine treated at the Geisinger Medical Center since the last report in 1957, were found to have their tumors in the duodenum in three and in the ileum in five. This is a similar representation of the site where tumors occur as found in the previous series. All but two patients had symptoms related to the tumor. Three presented with abdominal pain and three with gastrointestinal bleeding. Five of the tumors were diagnosed preoperatively, and three found incidentally at the time of surgery for another condition. All tumors were removed, except in one patient who refused surgery, either by primary resection or by local removal of the tumor where resection seemed hazardous.

Summary and Conclusions

Eight patients with benign tumors of

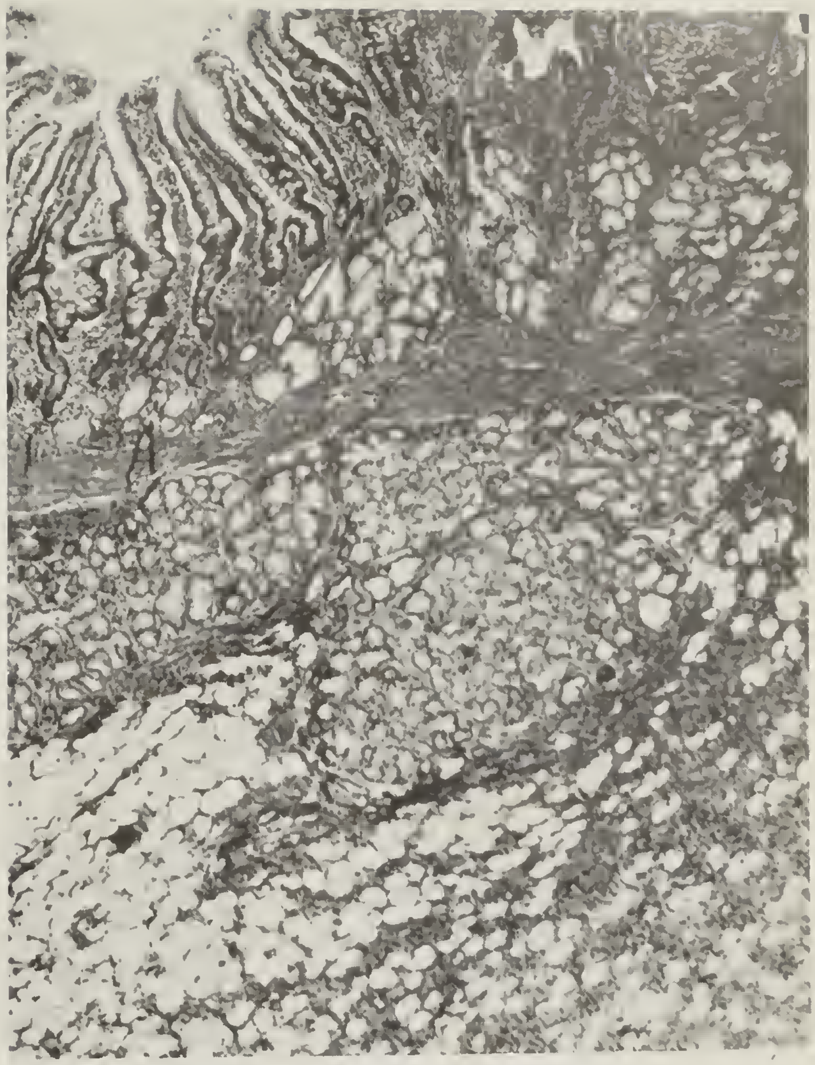
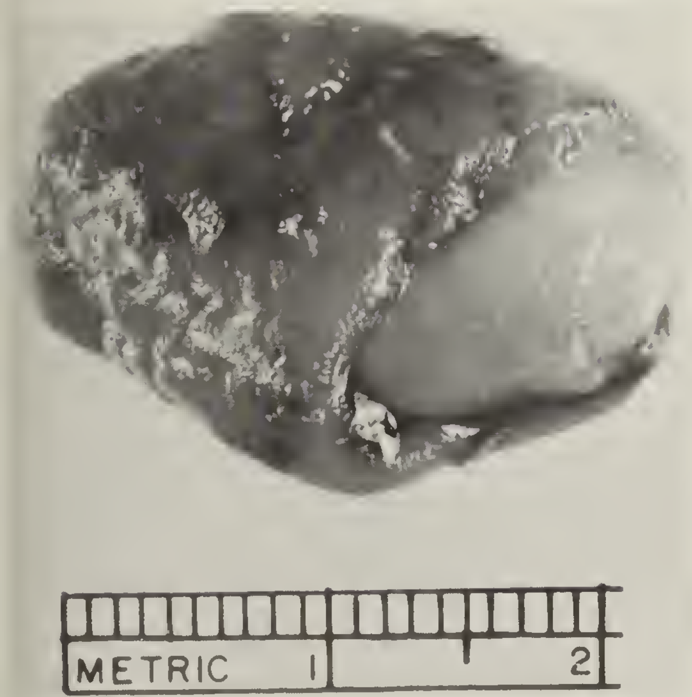


Figure 2 (*above*) *Microscopic Section (72x) (H&E Stain) of the Duodenum—margin of mucosal ulceration in upper left hand corner and lipoma in lower left hand corner.*

Figure 1 (*below*) *Pedunculated Lipoma of the Duodenum with an Ulcer on the Top.*



the small bowel, collected from 1953 to the present time, have been added to the previously reported twenty-four seen and treated at the Geisinger Medical Center. An interesting patient with a lipoma of the duodenum is reported in detail, pointing out the difficulty one may encounter in diagnosing this elusive entity. When the physician is confronted with a patient with unexplained anemia, a history of gastrointestinal bleeding, and hemoccult positive stools, he must be cognizant of the fact that a small bowel neoplasm may be the source of the symptoms. Although the most likely lesions causing persistent hemoccult positive stools will be found in the stomach or the colon, roentgenographic studies including the small bowel should be repeated until the source has been found.

REFERENCES

1. Rivers, L.; Silverstein, J. and Tope, J. W.: *Benign Neoplasms of the Small Intestine*. Int. Abstr. Surg. 102: 1038, Jan. 1956.

2. Knoernschild, H. F. and Kelley, H. G.: *Benign Tumors of the Duodenum*. JAMA 181: 49–51, July 7, 1962.

3. Lukash, W. M.; Hyams, V. J. and Nielsen, O. D.: *Neurogenic Neoplasms of the Small Bowel: Benign nonchromaffin paraganglioma of the duodenum*. Report of a case. Amer. J. Dig. Dis. 11: 575–579, July 1966.

4. Guida, P. M.; Todd, J. E.; Moore, S. W. and Beal, J. M.: *Zollinger-Ellison Syndrome with Interesting Variations*. Amer. J. Surg. 112: 807–817, Dec. 1966.

5. Gemer, M. and Feuchtwanger, M. M.: *Ganglioneuroma of the Duodenum*. Gastroenterology 51: 689–693, Nov. 1966.

6. Hoffman, B. P. and Grayzel, D. M.: *Benign Tumors of the Duodenum*. Amer. J. Surg. 70: 394–400, Dec. 1945.

7. Earlam, R. J. and Cowan, W. K.: *Adenoma of Brunner's Glands*. Brit. J. Surg. 53: 736–738, Aug. 1966.

8. Braasch, J. W. and Denbo, H. E.: *Tumors of the Small Intestine*. Surg. Clin. N. Amer. 44: 791–809, June 1964.

9. Serrano, J. F. and McPeak, C. J.: *Primary Neoplasms of the Duodenum*. Surgery 59: 199–202, Feb. 1966.

10. Krouse, J. M.; Eyerly, R. C. and Babcock, J. R.: *Tumors of the Small Bowel*. Amer. J. Surg. 101: 121–127, Jan. 1961.

11. Garret, J. A.: *Fibroma of the Duodenum*. Brit. J. Surg. 54: 81–83, Jan. 1967.

12. DasGupta, T. and Brasfield, R.: *Metastatic Melanoma*: A clinico-pathological study. Cancer 17: 1323–1339, Oct. 1964.

13. Haskin, B. J.: *Multiple Nodules of the Small Bowel*. JAMA 200: 634–635, May 15, 1967.

14. Comfort, M. W.: *Submucous Lipomata of the Gastrointestinal Tract: Report of 28 cases*. Surg. Gyrlec Obstet. 52: 101–118, Jan. 1931.

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Adrenal Corticosteroid Therapy of Cerebral Edema

The purpose of this article is to discuss briefly the use of adrenal corticosteroids in the management of cerebral edema. Significant published experimental and clinical investigations have been reviewed and summarized. These studies may be familiar to neurosurgeons and neurologists, but are probably less well known to physicians in other specialties.

Experimental Studies

Table 1 lists some of the experimental studies regarding the effect of adrenal corticosteroids on cerebral edema. These began more than twenty years ago when it was observed that cerebral edema resulting from exposure of a cat brain to air could be prevented by the systemic administration of adrenal cortical extract.[33] This observation was subsequently confirmed[15] and later, hydroxycorticosterone[16] and dexamethasone[17] were found to be similarly effective. Most have been in vivo studies employing various experimental models to produce brain lesions and cerebral edema, and such methods as psyllium seed implantation,[10,26,27] triethyltin administration,[48,49] vegetable oil embolization,[2,18] or freezing[3,29,30,45] have been used. Some have been controlled studies comparing the results of corticosteroid administration with those obtained in untreated animals. Except when severe anoxia and cell death have been produced, adrenal corticosteroid therapy generally has been effective in reducing cerebral edema. In an in vitro study cortisone also was found to prevent the swelling of brain slices from adrenalectomized rats.[8]

Electronmicroscopy studies have been of special interest in providing objective evidence of response in experimental cerebral edema. A study employing triethyltin administration to produce cerebral edema resulted in a diffuse localization of edema in the white matter of the brains of untreated animals but only focal edema in the brains of the animals given dexamethasone. In addition, the usual increased water and potassium and decreased sodium content found in the white matter also was influenced favorably.[48,49] In another animal study using psyllium seed implantation to produce cerebral edema, the administration of dexamethasone was associated with better neurological status of the animals and less severe cellular changes of cerebral edema as seen by electronmicroscopy. The effect was considered to result in some way from the reduction of a deranged water electrolyte transport mechanism within the brain at the capillary-glial surface where abnormal fluid retention occurs primarily within the astroglia and in the white matter extracellular space.[27]

Other work demonstrated that dexamethasone administration had a stabilizing effect on the lipoprotein mitochondrial membrane in cells of an anoxic brain.[1] Glucocorticoid administration also has been found to reduce the transudation of radioactive labelled serum albumin into the area of an experimentally produced brain lesion.[40] Mice also have been reported to survive longer during dexamethasone administration after implantation of melanomata in the brain, and some reduction in tumor size was noted.[24]

Clinical Studies

Clinical reports which provide patient data on the use of adrenal corticosteroids in the therapy of cerebral edema have been summarized in Table 2. These studies began with the observation by neurosurgeons that patients given corticosteroids as replacement therapy during surgical removal of hypophyseal tumors had less post-operative complications from cerebral edema.[20,34,50,51]

Another important observation was made during the exploration of adrenal corticosteroid therapy to suppress endogenous adrenal activity in patients with disseminated tumors such as breast carcinoma. One of the first patients had extensive cerebral metastases with marked neurological findings which improved impressively after adrenal corticosteroid treatment was started.[23]

During the investigation of what concentration of an adrenal corticosteroid could be achieved in gliomas as compared to surrounding brain, patients were observed to have less post-operative cerebral edema. Later, patients with recurrent brain tumors and obvious signs and symptoms of cerebral edema were given adrenal corticosteroids without surgical decompression. Many of these patients had significant relief of symptoms accompanied, when measured in a few cases, by improvement in the vessel displacement seen on cerebral angiography. This led to an extensive evaluation of dexamethasone therapy in over four hundred patients described in a series of articles during the next five years.[10–13]

Echoencephalography has been used to demonstrate objective evidence of beneficial effect from adrenal corticosteroid therapy in patients with cerebral edema.[14] Also, by the continuous monitoring of ventricular fluid pressure, corticosteroid administration to patients with cerebral edema has been found to decrease pressure and to reduce the frequency and height of the "plateau waves" which are noted with an elevated ventricular fluid pressure.[25]

Electronmicroscopy studies of human brain tissue like those in the experimental animal also have confirmed the beneficial effects of adrenal corticosteroid administration. Samples of brain tissue removed at surgery from patients treated with dexamethasone beginning twenty-four hours before operation were compared to samples of brain tissue from patients with known cerebral edema and to patients undergoing craniotomy for other reasons who did not receive adrenal corticosteroid therapy. All the steroid treated patients had signs and symptoms of cerebral edema before therapy and all were improved clinically at the time of craniotomy. The severity of changes seen by electronmicroscopy correlated with the clinical evaluation of prior severity of the cerebral edema and the beneficial clinical response to dexamethasone therapy. Clinical improvement appeared to be associated particularly with a reduction in astrocyte volume and a decrease in the extracellular space of the white matter with a return of myelin and axonal fluid accumulation toward normal. This was confirmed also by a grid scan method for quantitative evaluation of tissue sections. Again it was hypothesized that the benefit from steroid therapy results possibly from some effect which reverses abnormal water electrolyte transport mechanisms particularly at the capillary-glial interface.[28]

Other reports have confirmed the benefit of adrenal corticosteroid therapy in the management of patients with brain tumor or post-operative edema.[14,22,25,36,42,46,52] In most cases reported in the various published articles, no other form of drug therapy for cerebral edema was used. In addition to use in post-operative edema and brain tumor patients, adrenal corticosteroids have been reported to be helpful when administered to some patients with brain trauma associated with head injury.[10,47]

However, the administration of adrenal corticosteroids for the therapy of cerebral edema resulting from cerebral vascular accidents is less well established. Some early reports stated that the administration of these agents might benefit patients with strokes.[37,38,43] Two controlled studies did not indicate benefit,[7,19] but another study involving a group of severely ill patients suggested therapy was of value compared to placebo in patients with massive cerebral infarction but not in the presence of brain stem dysfunction nor intracerebral hemorrhage.[41] Further controlled studies are necessary to determine conclusively whether adrenal corticosteroid therapy is useful in the management of the stroke patient.

Adrenal corticosteroid therapy has been found helpful in some patients with benign intracranial hypertension.[31,39] This syndrome itself may occur following corticosteroid therapy and is usually

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TABLE 1

CEREBRAL EDEMA
SOME EXPERIMENTAL STUDIES IN ANIMALS
RELATIVE TO EFFECT OF ADRENOCORTICAL STEROIDS

Investigators	Year Reported	Adrenocortical Steroid Used	Model Employed	Criteria					Results
				Species Used	Gross Changes	Histological or Histo-chemical	Electron-microscopy	Other	
M. Prados, et al.[33]	1945	Adrenocortical extract	Exposure of brain to air	cat	X	X		X	Prevention of brain swelling and capillary permeability and EEG changes
R. G. Grenell & E. L. McCawley[15]	1947	Adrenocortical extract	Exposure of brain to air	cat	X	X		X	Prevention of brain swelling and EEG changes
J. M. Foley, et al.[9]	1953	Cortisone	Stab wound	guinea pig	X	X			Prevention of edema about wound and inhibition of inflammatory response
R. G. Lippert, et al.[26]	1960	Cortisone	Psyllium seed implantation	dog	X	X			Considered to reduce cerebral edema
F. Plum, et al.[32]	1960	Dexamethasone	Carotid ligation and anoxia exposure	rat	X	X			No beneficial effect observed
E. E. Blinderman, et al.[2]	1962	Methylprednisolone	Vegetable oil embolization	dog	X	X			Prevention of increased osmolarity and water content
Y. Hasegawa[17]	1962	Dexamethasone	Exposure of brain to air	rabbit	X	X			Reduction of edema and increased water content of brain tissue
H. Pappius & D. R. Gulati[29]	1963	Cortisone	Freezing lesions and surgical removal of part of occipital lobe	cat	X	X			No beneficial effect in terms of cerebral edema or changes in water and electrolyte content
H. Hatanaka, et al.[18]	1963	Prednisone	Sesame seed oil embolization	dog	X	X		X	Administration before embolization found to prevent leakage of RISA into tissues
D. A. Scialabra & K. Shellman[44]	1964	Methylprednisolone	Liquid nitrogen for freezing lesions	dog	X	X			Found protective effect with less edema, increased survival and better neurological status
J. M. Taylor, et al.[48,49]	1964-65	Dexamethasone	Triethyltin induced edema	rabbit	X	X	X		Found treated animals in comparison to untreated animals had reduction to edema and better neurologic status
R. A. Clasen, et al.[3]	1965	Prednisolone	Liquid nitrogen freezing lesions	monkey	X	X		X	No protective effect found in terms of edema or leakage of RISA or dye
E. Blinderman[1]	1965	Dexamethasone	Anoxia	mice		X			Considered protective effect on mitochondrial membrane by observing decreased histochemical staining of enzymes
L. A. French[10]	1966	Dexamethasone	Psyllium seed implantation and intra-carotid injection of 90% Hypaque	rabbit	X	X		X	Found reduction of cerebral edema from both methods
D. M. Long, et al[21]	1966	Dexamethasone	Psyllium seed implantation or inflation of subdural balloon	rabbit & dog	X	X	X	X	Beneficial in terms of clinical status, and electromicroscopy revealed decreased edema
D. G. Kotsilimbas et al.[24]	1967	Dexamethasone	Melanomata implantation into brain	mice	X	X		X	Found longer survival and better clinical status with reduction of edema and tumor size
R. L. Rovit & R. Hagan[40]	1968	Dexamethasone	Radio-frequency induced brain lesion	cat	X	X		X	Observed by radio-autography, scintillation counting, and histologic exam. A significant reduction of extravascular RISA in steroid treated cats as compared to control group
H. M. Pappius & W. P. McCann[30]	1969	Dexamethasone and cortisone	Freezing lesion	cat	X	X		X	Observed diminished increase in weight and decreased RISA uptake in traumatized cerebral hemisphere at 48 hrs. after the lesion with dexamethasone therapy. EEG abnormalities present in control group also were improved in the treated group

observed when therapy is discontinued or dosage reduced abruptly. Likewise, cerebral edema has been reported in untreated patients with primary adrenal insufficiency. Benign intracranial hypertension also may occur independently of any steroid therapy. Other causes of cerebral edema for which the adrenal corticosteroids have been reported to be useful include encephalitis,[53] trichinosis,[5] asphyxia,[44] and falciparum malaria.[6]

Patients with cerebral edema who are treated with adrenal corticosteroids often exhibit a rapid improvement of their headache, nausea, vomiting, or impaired sensorium. Some patients who have been comatose and severely ill have been reported to respond. Usually, some response occurs within twenty-four hours after beginning therapy and maximum improvement is achieved within two to four days. However, improvement of signs such as papilledema may require many days. Relatively large doses of adrenal corticosteroids are given initially to produce improvement. Dosage is then gradually reduced and discontinued. Some patients, such as those with recurrent brain tumor, may have their therapy continued on a maintenance basis. A frequently used drug regimen has involved the initial intravenous administration of 10 mg. of dexamethasone followed by 4 mg. every six hours intramuscularly until maximum response is achieved. Dosage is then reduced and oral administration usually employed. With any chronic administration the maintenance dose should be adjusted to achieve an effective minimal dosage for the individual patient, and this has been reported to vary from approximately 3 to 9 mg. of dexamethasone or its equivalent per day.

As with any drug therapy the potential risks as well as benefits require consideration. The published reports in regard to the use of adrenal corticosteroids in the management of cerebral edema indicate that adverse reactions generally have not been frequent. However, many of the patients have been treated for relatively short periods of time. Particularly with chronic administration some patients

TABLE 2

SOME CLINICAL REPORTS IN REGARD TO ADRENAL CORTICOSTEROIDS IN THE THERAPY OF CEREBRAL EDEMA

Investigator	*Year Reported*	*Cerebral Edema Etiology*	*Number of Cases*	*Adrenal Corticosteroid Used*	*Usual Dosage*	*Criteria of Response*	*Results*
S. Kofman, et al.[23]	1957	Chiefly patients with cerebral metastases from breast carcinoma	22	prednisolone	50 mg. b.i.d. and up to 400 mg/day	Improvement in neurological symptoms and evidence of increased intracranial pressure	Nine of 15 patients with breast carcinoma metastases improved including 1 patient on therapy for 15 months. Five of other 7 patients exhibited some improvement. Response correlated poorly with EEG changes.
J. H. Galicich et al.[13]	1961	Primary and metastatic brain tumors	14	dexamethasone	10 mg. IV & then 4 mg. IM q6h initially followed by oral administration	Improvement in neurological symptoms and evidence of increased intracranial pressure. Angiograms in some patients.	Thirteen of 14 patients had dramatic improvement as evidenced by relief of signs and symptoms of cerebral edema and decrease in neurologic deficit. In 2 cases there was angiographic proof of decrease in size of intracranial mass.
J. H. Galicich & L. A. French[12]	1961	Brain tumor Postoperative cerebral edema	21 13	dexamethasone	10 mg. IV & then 4 mg. IM q6h usually for 2–4 days. Then oral administration. Maintenance dosage of 1–3 mg. t.i.d.	Improvement in signs and symptoms of cerebral edema and increased intracranial pressure and of neurological deficit.	Eighteen of 21 brain tumor patients improved with 13 having improvement of neurologic deficit with onset usually in 12–18 hours. Ten of 13 postop edema patients improved within 5–18 hours. Three who did not respond were considered moribund.
T. Rasmussen & D. Gulati[36]	1962	Patients undergoing temporal lobectomy for focal cerebral seizures with steroid used prophylactically. Compared 2 different dosage regimens to previous series without steroid	66	cortisone	Compared 8 day and 10 day therapy for prophylaxis	Used graded scale to evaluate postop. hemiparesis, aphasia, psychological defects, seizures, and aseptic meningitis.	Larger dosage regimen in 35 patients particularly demonstrated beneficial effect on the criteria evaluated particularly in regard to the incidence of hemiparesis.
J. Verdura, et al.[52]	1963	Brain tumor	1	hydrocortisone	150 mg. q6h IM initially then 100 mg. q6h	Clinical status and angiography	Improved clinical symptoms and signs and a significant decrease in vascular displacement on angiography
L. A. French & J. H. Galicich[11]	1964	Primary and secondary brain tumors. Postop. cerebral edema Closed head trauma (all comatose for 24+ hours.) Subarachnoid hemorrhage Miscellaneous origin	89 25 11 8 11	dexamethasone	10 mg. IV & then 4 mg. IM q6h until maximum response then usually transferred to oral therapy. Some tumor patients treated with maintenance therapy of 6–8 mg./day with several for up to 1 year.	Evaluation of neurologic symptoms. Six patients had cerebral angiography before and during therapy.	In largest series of tumor patients onset of response noted in 12–18 hrs. with maximum response within 4 days usually. Improvement noted in 80 of 89. Sixteen of 21 postop. edema patients improved. Five of 11 comatose head trauma patients improved so they were alert and oriented within 24 hrs. Seven of 8 obtunded subarachnoid hemorrhage patients improved. Four patients with edema related to X-ray therapy improved.
A. Garde[14]	1965	Brain tumor	30	dexamethasone	12–16 mg/day initially then reduced	Improvement in neurological symptoms. Echoencephalograms done serially in 9 patients. EEG reported for 3.	Improved signs and symptoms in most patients. Echoencephalogram recorded decreased brain displacement enough to be significant in four. EEG improved in two.
G. Kullberg & K. A. West[25]	1965	Brain tumor	7	dexamethasone & betamethasone	Approximately 20 mg./day initially	Clinical symptoms. Continuous ventricular fluid pressure recording	Improvement in 5 of 7 patients both clinically and in terms of reduction of pressure.
N. B. Ruderman & T. C. Hall[42]	1965	Brain tumor	17	various glucocorticoids	60–110 mg./day of prednisone or its equivalent	Clinical symptoms and signs	Significant neurologic improvement noted in 11 of 17 patients.
R. R. Sparacio et al.[47]	1965	Severe head injury	36	methylprednisolone	40 mg. IV then 40 mg. IM q4h for 7 days then gradual reduction	Clinical course and survival	Twenty of 36 survived with prognosis improved chiefly for patient with injury without intracranial blood clots.
D. F. King, et al.[22]	1965	Brain tumor	24	prednisolone	Up to 60 mg./day initially in divided doses	Clinical signs and symptoms of cerebral edema.	Objective and subjective improvement noted in 21 of 24 patients and in 19 was attributed to this therapy.
L. French[10]	1966	Brain tumor Head injury Op & postop. edema Subarachnoid hemorrhage X-ray therapy Intracerebral hematoma "Pseudo tumor cerebri"	249 63 58 46 8 6 3	dexamethasone	Not stated in article	Clinical signs and symptoms of cerebral edema	There was marked improvement in 330 of 433 patients after adrenal corticosteroid therapy.
D. M. Long, et al.[28]	1966	Brain tumor Brain abscess Intracerebral hematoma "Pseudo tumor cerebri"	10 2 2 1	dexamethasone	10 mg. IV then 4 mg. q6h for at least 24 hrs. before tissue samples obtained	Clinical evaluation plus electronmicroscopy studies of brain tissue	All patients considered to exhibit improvement clinically plus beneficial changes on electronmicroscopy in terms of astrocyte cytoplasm and the extracellular accumulation of fluid in the white matter.
R. A. Smith & W. A. Smith[46]	1967	Brain tumor Brain abscess	4 1	dexamethasone	Varying dosage schedules	Clinical signs and symptoms	Relief of symptoms and improved neurological condition.

might be expected to develop some of the well known complications of adrenal corticosteroid therapy.

Patients frequently have been given ulcer diets and supplementary antacids as a precaution relative to possible gastrointestinal ulcer or hemorrhage. In most of the published reports, peptic ulcer occurrence generally has been infrequent. For example, in the large series of 433 patients treated with dexamethasone there were only four episodes of acute gastrointestinal ulceration or bleeding.[10] In another series of over 300 cases given cortisone, there was one case of perforated gastric ulcer.[35] However, an attempt to provide more definitive information regarding the possible risk of gastrointestinal bleeding involved a comparison of 200 patients between 1962 and 1965 who were treated with methylprednisolone or dexamethasone following craniotomy with a similar group between 1955 and 1960 who did not receive steroids. After craniotomy the comatose male patient was especially vulnerable. The incidence of gastrointestinal bleeding was four times greater in the group who received the steroids in a dosage over 40 mg. of methylprednisolone or its equivalent per day in the postoperative period. Nevertheless, except possibly for the patient with a documented active ulcer, the beneficial effects from the use of steroids to control cerebral edema after craniotomy were concluded to outweigh any risk. Precautions were recommended in regard to reduction of dosage whenever possible after one week, careful observation of patients, and the prophylactic use of antacids.[4]

Other possible complications from steroid therapy might be delayed wound healing or wound infections. It has been suggested that wound healing is not interfered with in patients with a normal skin but may be in patients with an abnormal skin. Wound infection does not seem to have been a problem. Water and electrolyte disturbances and psychic disturbances have been reported in a few patients. Therapy has been reported occasionally to mask the presence of a postoperative cerebral hematoma. Some patients also have exhibited an exacerbation or recurrence of their cerebral edema on reduction of dosage or cessation of therapy.[10]

Comments

The experimental and clinical studies which have been mentioned indicate that corticosteroid administration may offer benefit when relief of cerebral edema is required in a patient with brain tumor or head injury or following neurosurgery. It may also have utility in some patients with cerebral edema from other causes.

Although the beneficial effect of adrenal corticosteroid administration on cerebral edema has been demonstrated both experimentally and clinically, the exact mechanism by which this occurs is not clear. Whether this is part of the well-known anti-inflammatory action of corticosteroids or some other effect is not resolved. As previously mentioned, it has been theorized to be an effect on abnormal water and electrolyte transport mechanisms at the capillary-glial interface.

The therapeutic response which has been noted in some patients with brain tumor or post-operative edema seems to provide a basis of justification for the exploration of the use of corticosteroids in any patient with cerebral edema requiring treatment when no contraindication to such therapy exists. In such diseases as cerebral infarction, further controlled studies are desirable to determine the extent of any usefulness.

In this age of controlled studies and statistical analysis, some physicians might question the human data in regard to the efficacy of the adrenal corticosteroids in the management of cerebral edema inasmuch as double-blind controlled studies have not been done. However, as has been noted, various objective measurements of response have been utilized. Moreover, experienced investigators were able to compare response to the usual fate of untreated patients. A rapid and dramatic improvement in severely obtunded or comatose patients following the initiation of adrenal corticosteroid therapy sometimes has been observed. It has been possible to alter the expected serious course of patients with brain tumor and cerebral edema sufficiently to permit them to be properly evaluated and prepared for surgery. Some patients with inoperable or recurrent brain tumors have been helped with at least a temporary relief of symptoms and the possibility of a reasonably normal existence for a longer time. Furthermore, there also have been the various experimental data from studies in animals which provide supportive evidence regarding the efficacy of glucocorticoids in the management of cerebral edema. The electronmicroscopy observations both in man and animals have provided confirmative evidence of usefulness.

It should be noted that this specific use of adrenal corticosteroids is not an approved indication in the official package circulars for the various available steroid preparations. However, this use of the adrenal corticosteroids is mentioned in such basic therapy references as *Current Therapy* and *The Pharmacological Basis of Therapeutics*.

Conclusions

The experimental and clinical studies regarding the use of the adrenal corticosteroids in the management of cerebral edema have been reviewed. This interesting application of these drugs seems well established even though the exact mechanisms of action remain to be determined. Response, however, has been demonstrated with improvement of symptoms and neurological signs, and by various objective measurements including electronmicroscopy studies both in experimental animals and patients.

REFERENCES

1. Blinderman, E.: *Effect of Dexomethasone on Mitochondria in Anoxic Brain*, Arch. Neurology 12: 278–283, 1965.

2. Blinderman, E. E., Graf, C. J., and Fitzpatrick, T.: *Basic Studies in Cerebral Edema: Its Control by a Corticosteroid (Solu-Medrol)*, J. Neurosurg. 19: 319–324, 1962.

3. Clasen, R. F., Cooke, P. H., Pandolfi, S., Carnecki, G., and Haso, G. H.: *Steroid-Antihistaminic Therapy in Experimental Cerebral Edema*, Arch. Neurol. 13: 584–592, 1965.

4. Cantu, R. C., Amir-Ahmadi, H., and Prieto, A.: *Evaluation of the Increased Risk of Gastrointestinal Bleeding Following Intracranial Surgery in Patients Receiving High Steroid Dosages in the Immediate Postoperative Period*, Int. Surg. 50: 325–335, 1968.

5. Dalessio, D. J. and Wolff, H. G.: *Trichinella Spiralis Infection of the Central Nervous System*. Arch. Neurology 4: 407–417, 1961.

6. Daroff, R. B., Deller, J. J., Kastl, A. J., and Blocker, W. W.: *Cerebral Malaria*, J.A.M.A. 202: 679–682, 1967.

7. Dyken, M. and White, P. T.: *Evaluation of Cortisone in the Treatment of Cerebral Infarction*, J.A.M.A. 162: 1531–1534, 1956.

8. Elliott, K. A. C. and Yrarrazaval, S.: *An Effect of Adrenalectomy and Cortisone on Tissue Permeability in Vitro*, Nature 169: 416–417, 1952.

9. Foley, J. M., Chambers, R. A., and Adams, R. D.: *The Effect of Cortisone on the Early Repair of Brain Wounds in Guinea Pigs*, J. Neuropath. Exp. Neurol. 12: 101–102, 1953.

10. French, L. A.: *The Uses of Steroids in the Treatment of Cerebral Edema*, Bull. N.Y. Acad. Med. 42: 301–11, 1966.

11. French, L. A. and Galicich, J. H.: *The Use of Steroids for Control of Cerebral Edema*, Chap. XII, Clin. Neurosurgery 10: 212–223, 1964.

12. Galicich, J. H. and French, L. A.: *Use of Dexamethasone in the Treatment of Cerebral Edema Resulting from Brain Tumors and Brain Surgery*, Amer. Practitioner 12: 169–174, 1961.

13. Galicich, J. H., French, L. A., and Melby, J. C.: *Use of Dexamethasone in the Treatment of Cerebral Edema Associated with Brain Tumors*, J. Lancet 81: 46–53, 1961.

14. Garde, A.: *Experiences with Dexamethasone Treatment of Intracranial Pressure Caused by Brain Tumors*, Acta Neurol. Scand. 41: Suppl. 13, Part 11, 439–443, 1965.

15. Grenell, R. G. and McCawley, E. L.: *Central Nervous System Resistance*. 111. The Effect of Adrenal Cortical Substances on the Central Nervous System, J. Neurosurg. 4: 508–518, 1947.

16. Grenell, R. G. and Mendelson, J.: *Adrenal Steroids and Cerebrovascular Permeability*—Preliminary Note, Bull. School Med. Univ. of Maryland 39: 56–68, 1954.

17. Hasegawa, Y.: *Experimental Studies of Acute Emergencies due to Increased Intracranial Pressure, Especially of the Effects of Adrenocortical Hormones*, J. Kunamoto Med. Assoc. 36: 88–105, 1962.

18. Hatanaka, H., Sano, K., Kitamura, K., Kamano, K., and Masuzawa, H.: *Steroids and Cerebral Edema*, Brain and Nerve 15: 624–633, 1963.

19. Hetzel, B. S., Lander, H., and Robson, H. N.: *Immediate Treatment of Apoplexy*, Brit. Med. J. 1: 122, 1957 (correspondence).

20. Ingraham, F. D., Matson, D. D., and McLaurin, R. L.: *Cortisone and ACTH as an Adjunct to the Surgery of Craniopharyngiomas*, New Eng. J. Med. 246: 568–71, 1952.

21. Jefferson, A.: *A Clinical Correlation Between Encephalopathy and Papilledema in Addison's Disease*, J. Neurol. Neurosurg. Psychiat. 19: 21–27, 1956.

22. King, D. F., Moon, W. J., and Brown, N.: *Corticosteroid Drugs in the Management of Primary and Secondary Malignant Cerebral Tumors*, Med. J. Australia 2: 878–881, 1965.

23. Kofman, S. J., Garvin, J. S., Nagamani, D., and Taylor, S. G.: *Treatment of Cerebral Metastases from Breast Carcinoma with Prednisolone*, J.A.M.A. 163: 1473–1476, 1957.

24. Kotsilimbas, D. G., Meyer, L., Berson, M., Taylor, J. M., and Scheinberg, L. C.: *Corticosteroid Effect on Intracerebral Melanomata and Associated Cerebral Edema*, Neurology 17: 223–226, and 274, 1967.

25. Kullberg, G. and West, K. A.: *Influence of Corticosteroids on the Ventricular Fluid Pressure*, Acta, Neurol. Scand. 41: Suppl. 13, Part 11, 445–452, 1965.

26. Lippert, R. G., Svien, H. J., Grindlay, J. H., Goldstein, N. P., and Gastineau, C. F.: *The Effect of Cortisone on Experimental Cerebral Edema*, J. Neurosurg. 17: 583–589, 1960.

27. Long, D. M., Hartmann, J. F., and French, L. A.: *The Response of Experimental Cerebral Edema to Glucosteroid Administration*, J. Neurosurg. 24: 843–854, 1966.

28. Long, D. M., Hartmann, J. F., and French, L. A.: *The Response of Human Cerebral Edema to Glucosteroid Administration*, Neurology 16: 521–528, 1966.

29. Pappius, H. and Gulati, D. R.: Water and Electrolyte Content of Cerebral Tissues in Experimentally Induced Edema, Acta Neuropath. 2: 451–460, 1963.

30. Pappius, H. M. and McCann, W. P.: *Effects of Steroids on Cerebral Edema in Cats*, Arch. Neurol. 20: 207–216, 1969.

31. Paterson, R., DePasquale, N., and Mann, S.: *Pseudotumor Cerebri*, Medicine 40: 85–99, 1961.

32. Plum, F., Alvord, E. C., and Posner, J. B.: *The Effect of Steroids on Experimental Cerebral Infarction*, Arch. Neurol. 9: 571–573, 1960.

33. Prados, M., Strowger, B., and Feindel, W.: *Studies on Cerebral Edema. II. Reaction of the Brain to Exposure to Air: Physiologic Changes*, Arch. Neurol. Psychiat. 54: 290–300, 1945.

34. Raaf, J., Stainsby, D. L., and Larson, W. L. E.: *The Use of ACTH in Conjunction with Surgery for Neoplasms in the Parasellar Area*, J. Neurosurg. 11: 463–470, 1954.

35. Rasmussen, T.: Conference with Professor Theodore Rasmussen (April 9, 1963) reported in paper of Hatanaka, H., et al. op. cit.

36. Rasmussen, T. and Gulati, D. R.: *Cortisone in the Treatment of Postoperative Cerebral Edema*, J. Neurosurg. 19: 535–544, 1962.

37. Roberts, H. J.: *Supportive Adrenocorticoid Therapy in Acute and Subacute Cerebrovascular Accidents with Particular Reference to Brain Stem Involvement*, J. Amer. Geriatrics Soc. 6: 686–702, 1958.

38. Roberts, H. J.: *Treatment of Cerebral Vascular Accidents*, J.A.M.A. 173: (correspondence) 1507, 1960.

39. Rose, A. and Matson, D. D.: *Benign Intracranial Hypertension in Children*, Pediat. 39: 227–237, 1967.

40. Rovit, R. L. and Hagan, R.: *Steroids and Cerebral Edema: The Effects of Glucocorticoids on Abnormal Capillary Permeability Following Cerebral Injury in Cats*, J. Neuropath. Exp. Neurology 27: 277–299, 1968.

41. Rubinstein, M. K.: *The Influence of Adrenalcortical Steroids on Severe Cerebrovascular Accidents*, J. Nerv. Ment. Dis. 141: 291–299, 1965.

42. Ruderman, N. B. and Hall, T. C.: *Use of Glucocorticoids in the Palliative Treatment of Metastatic Brain Tumors*, Cancer 18: 298–306, 1965.

43. Russek, H. I., Russek, A. S., and Zohman, B. L.: *Cortisone in Immediate Therapy of Apoplectic Stroke*, J.A.M.A. 159: 102–105, 1955.

44. Salmon, H. J.: *Hanging in Childhood*, J.A.M.A. 201: 204–205, 1967.

45. Scialabra, D. A. and Shulman, K.: *Use of Steroids in Clinical and Experimental Cerebral Edema*, Surg. Forum 15: 426–427, 1964.

46. Smith, R. A. and Smith, W. A.: *Steroid Therapy of Cerebral Edema*, J. Med. Assoc. Georgia 56: 324–328, 1967.

47. Sparacio, R. R., Lin, T. H., and Cook, A. W.: *Methylprednisolone Sodium Succinate in Acute Craniocerebral Trauma*, Surg. Gyn. Obst. 121: 513–516, 1965.

48. Taylor, J. M., Levy, W. A., Herzog, I., and Scheinberg, L. C.: *Prevention of Experimental Cerebral Edema by Corticosteroids, Biochemical and Ultrastructural Studies*, Neurology 15: 667–674, 1965.

49. Taylor, J. M., Levy, W. A., McCoy, G., and Scheinberg, L.: *Prevention of Cerebral Edema Induced by Triethyltin in Rabbits by Corticosteroids*, Nature 204: 891–892, 1964.

50. Troen, P. and Rynearson, E. H.: *An Evaluation of the Prophylactic Use of Cortisone for Pituitary Operations*, J. Clin. Endocrinol. Metab. 16: 747–754, 1956.

51. Tytus, J. S., Seltzer, H. S., and Kahn, E. A.: *Cortisone as an Aid in the Surgical Treatment of Craniopharyngiomas*, J. Neurosurg. 12: 555–564, 1955.

52. Verdura, J., Brown, H., and White, R. J.: *Use of Adrenal Steroids in Cerebral Metastasis*. Case Report of Improvement Documented by Angiography, Ohio State Med. J. 50: 693–694, 1963.

53. Ziegler, D. K.: *Newer Steroids in Nonviral Encephalitis*, Med. Clin. N. Amer. 51: 1189–1202, 1967.

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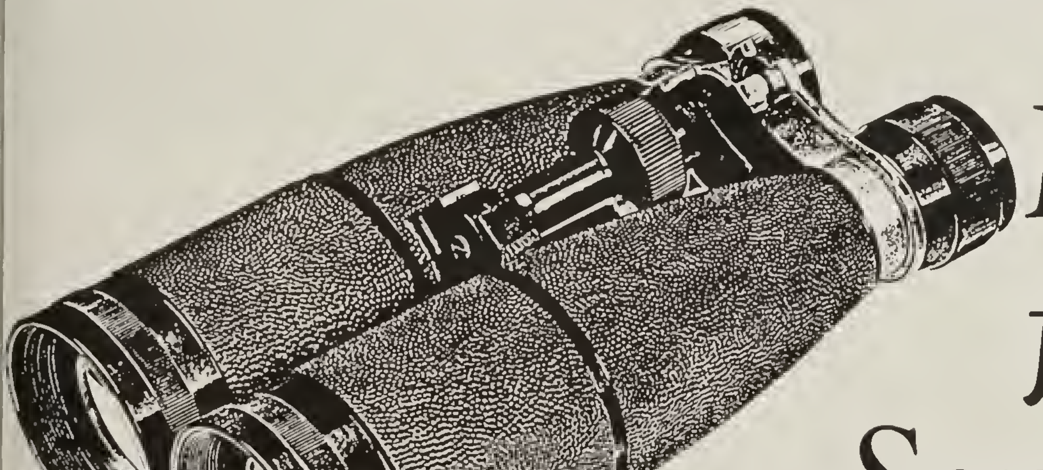

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Radiography and Isotope Tests in Medical Diseases of the Kidney

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Intravenous Urography

An intravenous urogram done in the conventional way is a physiological examination which yields more information about anatomy than about function. Apart from the information on the plain film, (opaque calculi, foreign bodies, bony lesions and extra-renal soft tissue masses) the anatomical display of the urinary tract is definitely improved by injecting larger than usual amounts of uropaque in a bolus. Visualization of the collecting systems and ureters rivals that obtainable on retrograde studies, and in addition, there is better opacification of the renal parenchyma (nephrogram) (Fig. 1). The intravenous urogram thus becomes an excellent test for showing the size, shape and position of the kidneys, the anatomy of the collecting system, any anomalies which may be present, and by virtue of the nephrogram, it may suggest the presence of discontinuities due to scars, infarcts or mass lesions in the renal parenchyma. Urinary tract obstruction, even of a mild degree, and gross abnormalities of function are usually apparent.

In some circumstances the diagnostic accuracy of the urogram will be affected by the timing of the study. It should be emphasized that severe renal colic may be accompanied by only mild, transient obstruction. Therefore, the urogram done early and preferably during the period of pain, will more likely be diagnostic (Fig. 2). Conversely, long standing chronic or intermittent obstruction may result in massive hydronephrosis with little pain or discomfort. This patient may present himself as a diagnostic problem with an abdominal mass. Whenever possible, the urogram (and for that matter, all of the isotope tests) should be done prior to retrograde studies or ureteral catheterization, since it is well documented that ureteral catheterization results in mild obstruction and may change renal function for several days. This is especially true in children. Improved techniques of intravenous urography will generally obviate retrograde studies.

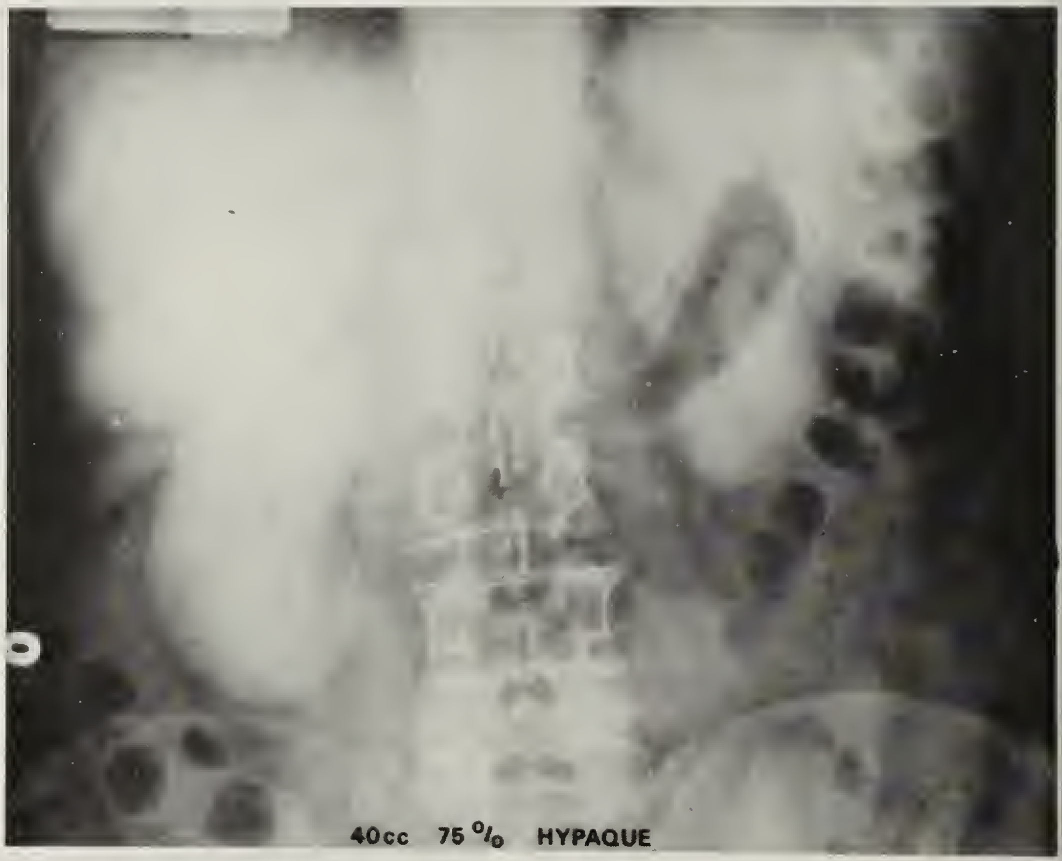


Figure 1. *Nephrogram following rapid intravenous injection of 40 cc. of 75% Hypaque. The difference in renal size and density is easily appreciated.*

Modifications of the Intravenous Urogram

Infusion Urogram: The injection of a large volume of uropaque (say 1 cc. per pound of 50% Hypaque) in a very short time (less than ten minutes) has been called an infusion urogram or drip infusion pyelogram.[1,2] Thus, in this test the amount of uropaque is generally four to five times greater than in the conventional urogram. This is diluted with an equal amount of 5 per cent dextrose in water causing a brisk urine flow and hence more complete filling of the collecting systems. The important factors in producing better visualization of the urinary tract with this test are the large volume of uropaque and the rapidity of administration.

The advantages of an infusion urogram are: (1) an excellent nephrogram is usually obtained, thereby increasing the chance of seeing small parenchymal defects; (2) excellent filling of the renal collecting system is obtained, so that minimal abnormalities can be visualized; (3) the ureters are usually shown throughout their extent, better demonstrating local compressions, displacements or strictures, as well as intrinsic abnormalities, such as ureteritis cystica; (4) the bladder is usually densely opacified; (5) diagnostic examinations may be obtained in the presence of severe renal failure. Some of these advantages are illustrated in Figures 3 and 4.

The hazards of an intravenous urogram are not appreciably increased by the larger doses of uropaques. The sensitivity reactions are not dose related. Despite the lack of proof that uropaques provoke antibody responses or histamine release, the usual immediate reactions are of an allergic type (hives and angioneurotic edema).[3] The systemic effects have not appreciably increased and there is no evidence that renal damage is caused or accelerated by these larger doses of uropaques.[1] In general, the radiopaque materials used for cholecystography and especially intravenous cholangiography are probably more nephrotoxic than the uropaques.[4,5]

Rapid Sequence Urogram: One way of obtaining more information about renal perfusion in a hypertensive work-up is to inject rapidly a relatively large amount of concentrated uropaque, such as 40 or 50 cc. of 75 per cent Hypaque, followed by films at frequent intervals.[6] The ischemic kidney may be smaller than the opposite kidney and this is best appreciated on the nephrogram seen on the first film. Very often, the quality of the nephrogram or its time of appearance is different on the two sides, but these differences have to be interpreted in the light of the whole sequence, since the nephrogram sometimes appears earlier and is denser on the ischemic side (Fig. 5A).[7] The ischemic kidney has a smaller glomerular filtration rate and greater absorption of water. As a result, the urine flow is decreased proportionately more than blood flow. Decreased urine flow causes delayed opacification of the collecting system on the ischemic side (Fig. 5B). Therefore, the films taken at one, two, or three minutes will show the collecting system opacified first on the side with the better blood flow and the nephrogram will persist longer on the ischemic side. On later films (fifteen to thirty minutes) the concentration of uropaque in the collecting system of the ischemic side may be greater than on the normal side, again, because of the slow flow and the greater absorption of water (Fig. 5C and 5D). In addition, the collecting system on the abnormal side is often smaller and the calyces are narrow or "spidery." Another helpful sign is ureteral notching, a manifestation of collateral blood flow to

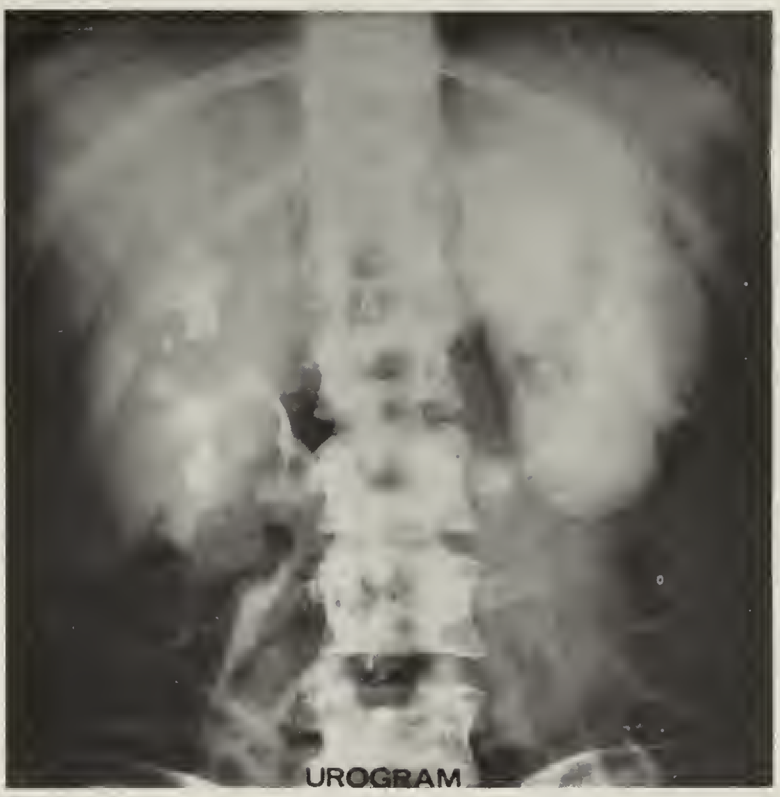


Figure 2. *Extremely dense nephrogram seen in a patient with acute renal colic. Even without visualization of the tiny lumbar ureteral calculus or dilatation of the renal collecting system and ureter, a combination of colic and this radiographic finding is virtually diagnostic of acute peripheral obstruction.*

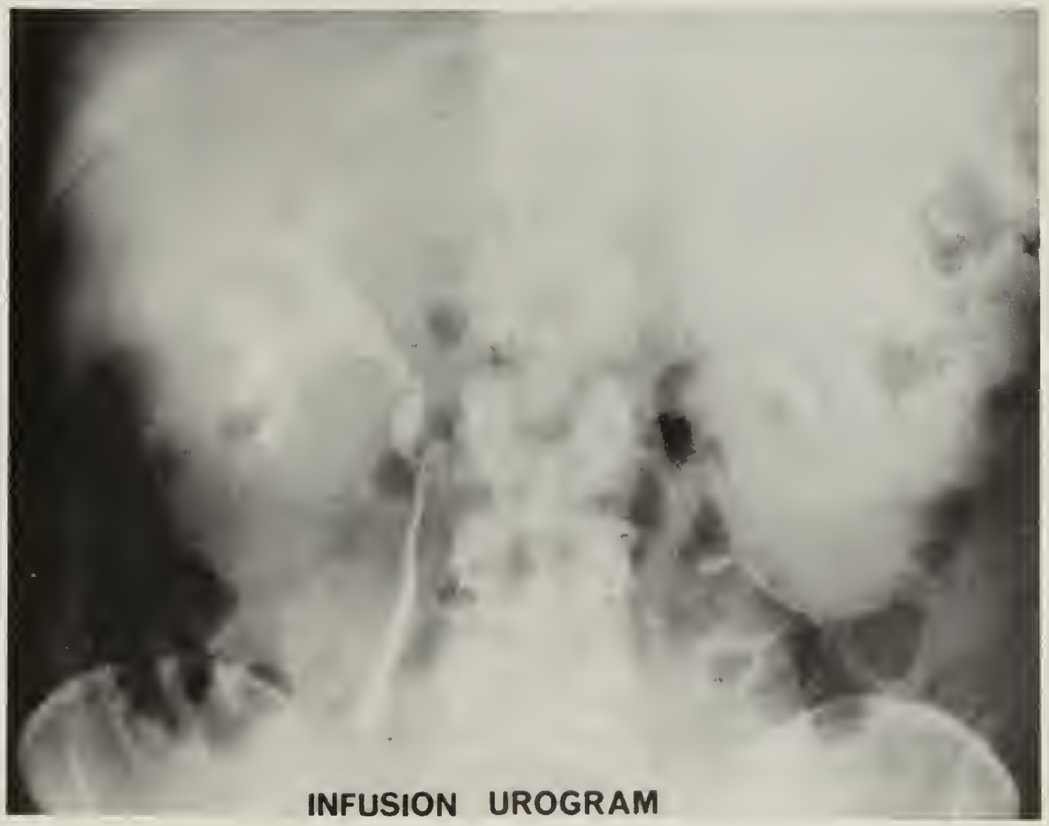


Figure 3. *Acute left pyelonephritis. The routine urogram showed no function on the left side and obstruction could not be excluded. Infusion urogram, despite the poor function, shows a non-dilated collecting system in a swollen left kidney, thus excluding obstruction. Note the excellent opacification and filling of the calyces, pelvis and lumbar ureter on the right.*

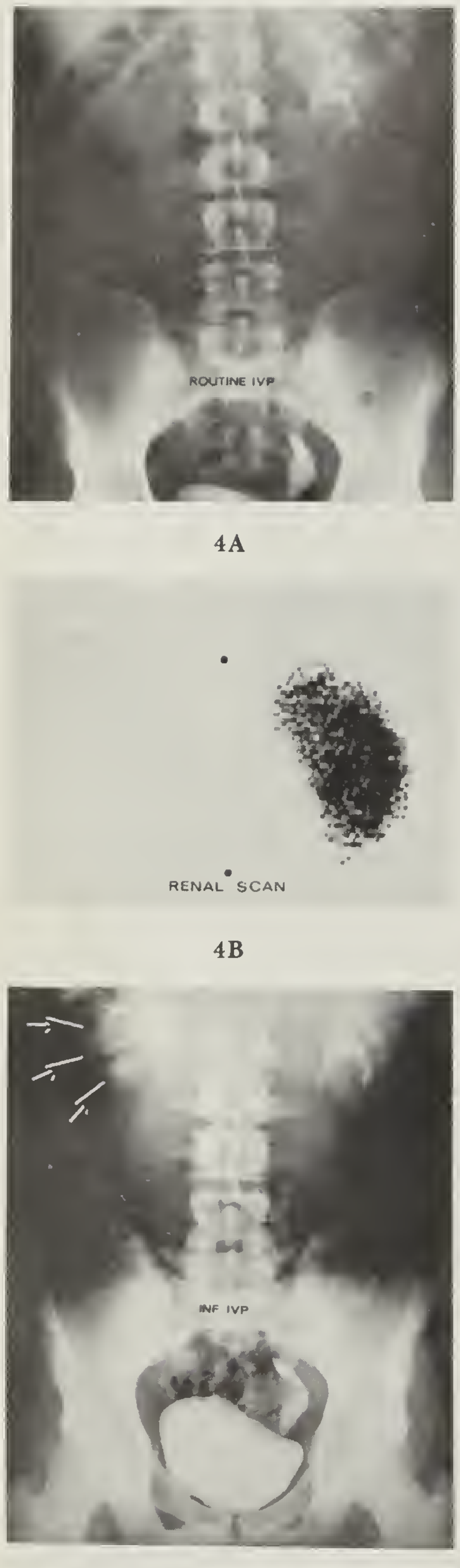


Figure 4. *(A and B) Chronic pyelonephritis with no evidence of a functioning kidney on the right on the routine urogram or renal scan. (C) Infusion urogram shows a hydronephrotic, atrophic kidney on the right due to ureteropelvic obstruction. Because of the appreciable function demonstrated on this test and the damaged kidney on the opposite side, it was decided to do a plastic procedure on the right to preserve remaining function.*

an ischemic kidney. One or more of these urographic abnormalities (comprising the so-called "slow flow pattern") is seen in many patients with renovascular hypertension. However, if there is more severe damage, the ischemic kidney will show little or no concentration rather than hyperconcentration. In a few cases, no hyperconcentration occurs because the reduced glomerular filtration rate in the ischemic kidney is balanced by reduced tubular function.

In doubtful cases, reduced urine flow on one side may be detected by the so-called "wash-out" test[8] using intravenous mannitol, urea or 5 per cent glucose solution. This test is done in conjunction with the rapid sequence urogram, usually beginning as soon as the three-minute film is inspected. A large volume of one of these osmotic diuretics is administered rapidly. Films taken every three minutes will show if there is any difference in the rate at which the opaque medium is washed out of the collecting systems. All of these tests are expensive and time-consuming, particularly the wash out test, since it is an addition to the rapid sequence urogram. Moreover, about 20 per cent of the patients having the wash-out test with osmotic diuretics have severe headaches.

Arteriography

Arteriography, whether in the form of aortography or selective renal arteriography, is the only direct method of studying the renal vessels. Atherosclerosis, aneurysms or fibromuscular dysplasias are readily detected. The core of the problem is to decide whether a given arterial lesion is the cause of renovascular hypertension. It has been stated that at least a 50 per cent occlusion of a vessel is necessary to produce significant renal ischemia. Clinical[9] and autopsy studies[10] have shown that renal artery stenosis is common in normotensives, especially in older people. Therefore, an attempt should be made to evaluate the hemodynamic effect of the stenotic lesion on the serialographic arteriogram.[7] This involves comparison of the rate of filling of the peripheral vessels, the time of appearance and quality of the nephrogram (capillary phase) and the time and rate of clearance of the contrast medium from these vascular structures (Fig. 6). The intense nephrogram obtained with renal arteriography is of considerable value in assessing the size and shape of the kidneys and in visualizing parenchymal defects (Fig. 7).

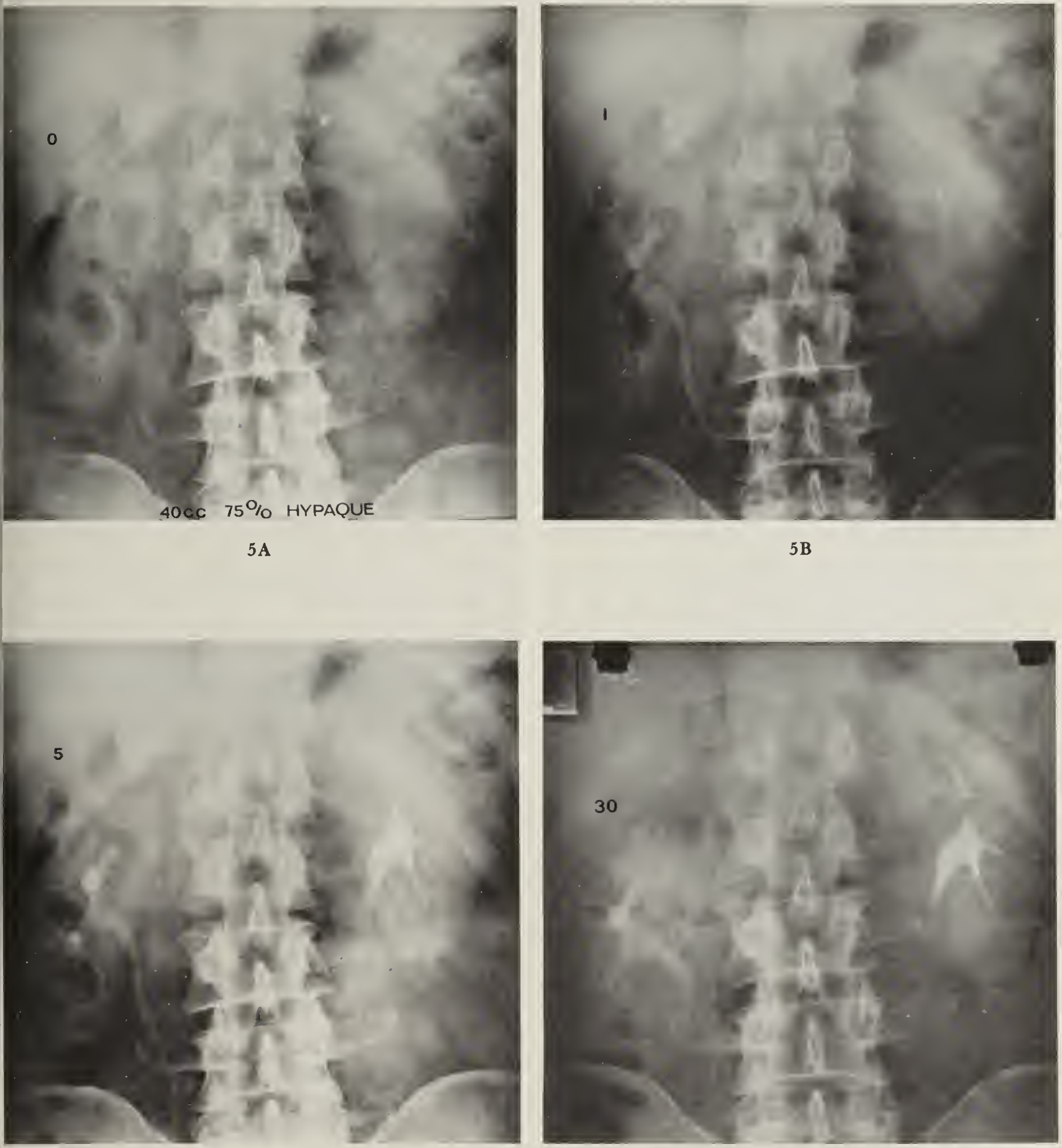
Angiographic studies of the vena cava and renal veins have been used to detect thrombi or other obstruction causing the nephrotic syndrome.

Tomograms

Abdominal tomograms (body section radiographs) can be very useful in the diagnosis of kidney disease. For instance, the atrophic kidneys of chronic nephritis or the large kidneys of polycystic disease are well shown by tomography. Calcifications of nephrocalcinosis are best demonstrated by tomograms. Tomograms done in conjunction with an infusion urogram provide an excellent demonstration of the renal parenchyma and, therefore, scars, masses and increased amounts of renal sinus fat can be readily appreciated (Fig. 8).

The Hippuran Renogram

The hippuran renogram (Fig. 9) is a graphic record of the changing quantity of radioactive hippuran in each kidney following rapid intravenous injection, as measured by external counters. In the renogram curve no single physiological parameter can be separated entirely from the others.[11] The first rapid spike, originally called the vascular phase, is largely due to non-renal vessels. The upward sloping portion of the curve to the peak has been called the secretory phase and it is this segment which is the best indicator of the relative blood flow to the kidneys. The slope of this portion of the curve indicates the rate at which hippuran is extracted from the blood, and since 90 per cent of the hippuran is extracted from the renal plasma on each passage, it closely reflects renal blood flow. The length of time from the injection to the peak of the curve is the transit time[12] for the hippuran through the kidney, as none appears in the bladder until after the peak has been reached. The shape of the down sloping portion of the curve, called the excretory phase, is highly dependent upon the rate of urine flow and is, therefore, the part most affected by the state of hydration of the patient. In patients with renal artery stenosis, all portions of the curve are usually affected (Fig. 10A) since



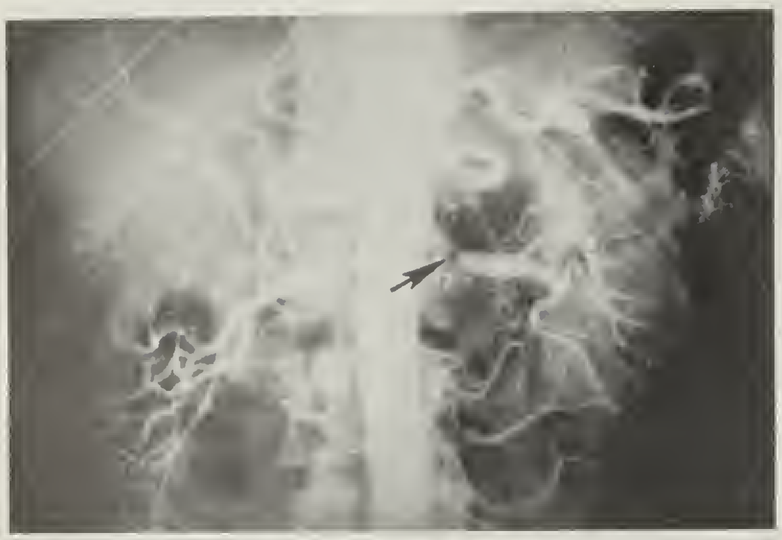
5A

5B

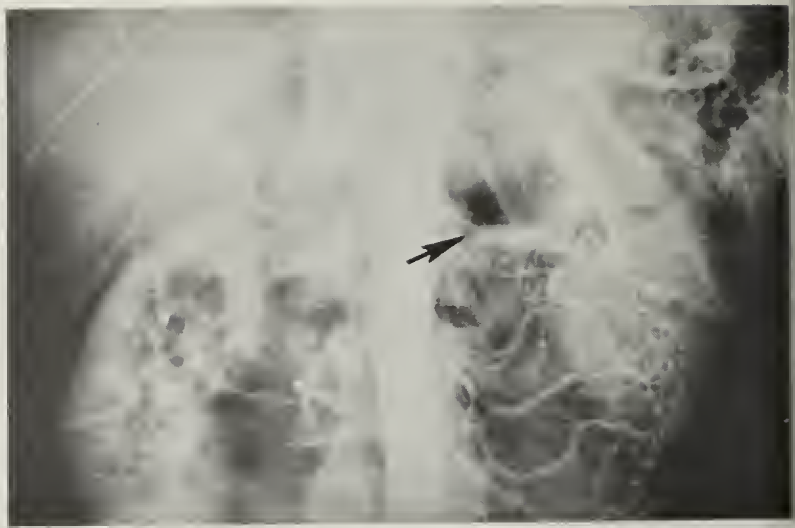
5C

5D

Figure 5. *Rapid sequence urogram on a patient with renovascular hypertension. The 0 film (A) taken immediately following rapid injection of 40 cc. of 75% Hypaque, shows the denser nephrogram on the left side. The kidneys are normal in size and shape. The one-minute film (B) shows persistence of the nephrogram on the left and earlier filling of the collecting system on the right. The five-minute film (C) shows relative hyperconcentration on the left with spidery calyces. The 30-minute film (D) shows persistent dense opacification on the left, while the concentration on the right is fading due to a more rapid urine flow. This sequence is unusual in that the nephrogram appears first on the abnormal side, but in other respects, is a classical example of a "slow flow" pattern, produced by the greater salt and water absorption on the ischemic side. Obviously, if an osmotic diuretic were given immediately after the five-minute film (as in the renal wash-out test) the difference seen in the 30-minute film would be accentuated.*



6A



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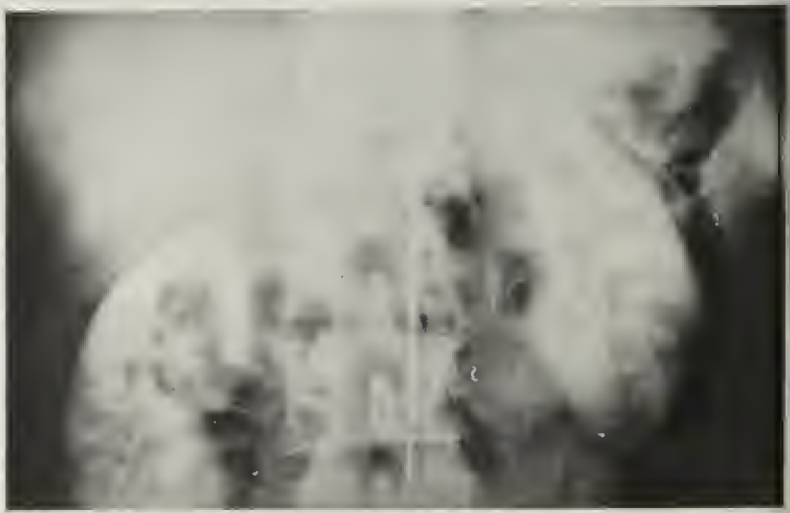

6C

Figure 6. *Same patient as in Figure 5. Selected films from a bilateral renal angiogram. (A) Typical atherosclerotic stenosis of the left renal artery with post-stenotic dilatation. (B) Shows delayed clearing of the contrast medium from the dilated portion of the left renal artery and an earlier and denser nephrogram on the right side. This capillary phase nephrogram occurs in a few seconds and is different from the nephrogram in Figure 5A which results from the concentration of the uropaque in the tubules. (C) The nephrogram density is maximal two seconds after A. Obviously, the intense nephrogram obtained by arteriography would be capable of showing small parenchymal defects.*

there is a decreased blood flow which affects the slope of the ascending portion of the curve and a decreased urine flow which affects the descending portion of the curve.

In a normal patient the two sides are almost identical. Therefore, unilateral abnormalities are generally easy to see. When both sides are abnormal, interpretation is more difficult and one must compare them against some standard. Unfortunately, there is no generally accepted quantitative method of interpretation, but qualitative evaluation may be more accurate anyway.[13] This is a very sensitive function test and unfortunately can be thrown off by inexact or inappropriate technique, particularly by poor position of the probes, by inadequate equipment, motion of the patient during the test and partial subcutaneous injection of the isotope. In addition, over-hydration, low salt intake and diuretics tend to minimize or obscure abnormalities.

The renogram is a non-specific test. For instance, the renogram in acute tubular necrosis may be similar to that in urinary tract obstruction and the renogram in chronic pyelonephritis may be identical to that in renal artery stenosis. This non-specificity is the chief reason that the test has a poor reputation as a predictor of the results of surgery for unilateral renal hypertension. Nevertheless, our experience supports those who consider the hippuran renograms to be the best screening test for unilateral renal hypertension.[14] We agree with those who say that a negative rapid sequence urogram combined with a negative hippuran renogram virtually excludes unilateral renal hypertension.[14,15] The only type of disease likely to be missed is a small segmental infarct. Infarcts are best demonstrated by kidney scans or selective renal angiography, though they may be seen on high quality nephrograms and especially nephrotomograms.

It should be emphasized that the renogram is a very sensitive indicator of ureteral obstruction, and therefore, is an excellent test to detect urinary obstruction following pelvic surgery or in patients with pelvic cancer. Since the renogram requires no preparation and has practically no radiation hazard, it is ideal for serial examination, such as follow-ups on patients with renal artery surgery (Fig. 10B).

Chlormerodrin Accumulation Test

The mercurial diuretic chlormerodrin, tagged with radioactive mercury, accumulates in the renal tubules following intravenous injection.[11] The rate of accumulation closely reflects the relative renal blood flow. The accumulation rate is affected slightly by renal tubular efficiency, but (in contrast to the hippuran renogram) very little by the patient's state of hydration and urine flow rate. This test is strictly a comparison between the two kidneys, based on the slopes of the uptake curves. If both kidneys are damaged to the same extent, the chlormerodrin accumulation test may give a normal result. However, in unilateral disease it has probed to be a good screening test. Examples of the curves are shown in Fig. 10A and 10B.

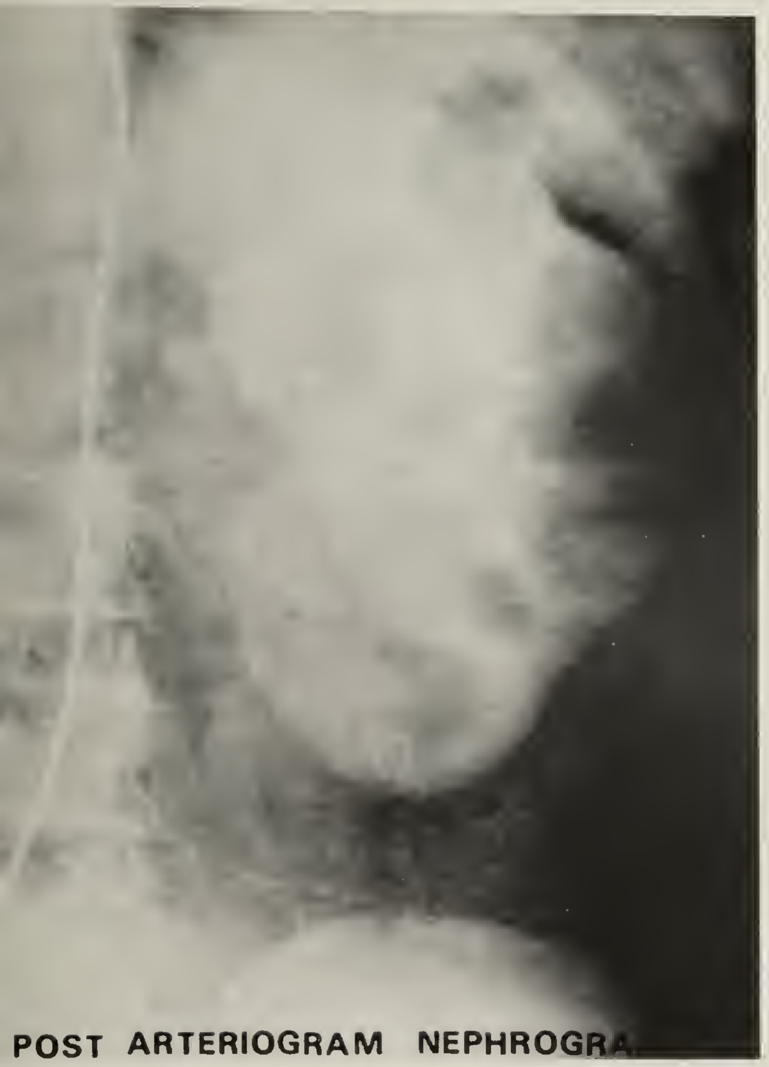

Figure 7. *Intense nephrogram seen with arteriography clearly shows the multiple cysts in a polycystic kidney.*

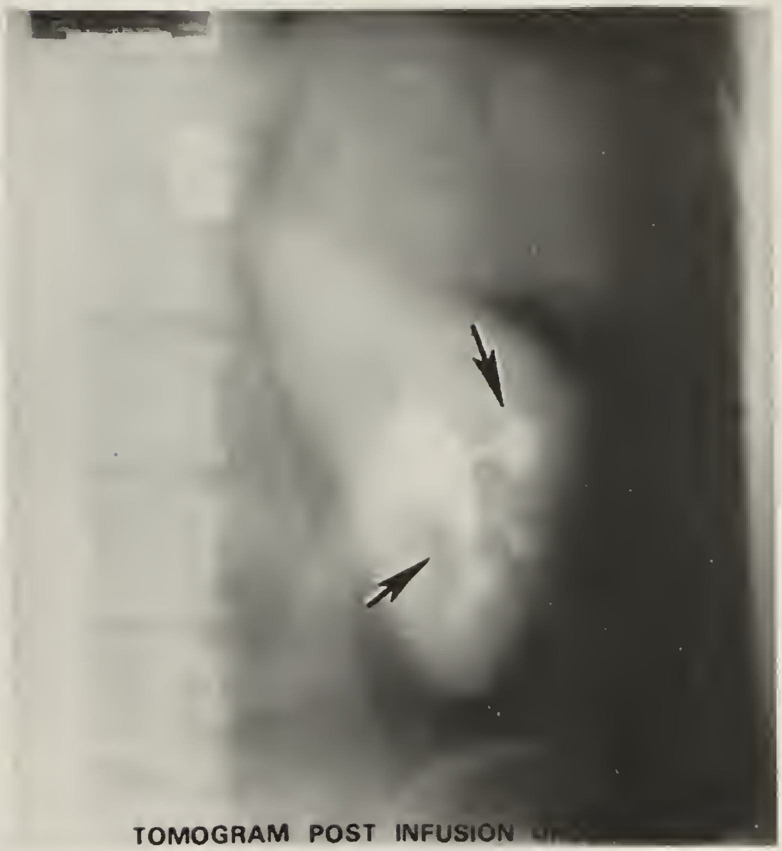

Figure 8. *Tomogram done in connection with an infusion urogram showing the dense nephrogram, which in conjunction with the complete visualization of the collecting system on the regular films, ruled out a mass lesion as a cause for the unusual contour of the kidney. The clubbing of the calyces (upper arrow) and the increased sinus fat (lower arrow) shown here are signs of chronic pyelonephritis.*

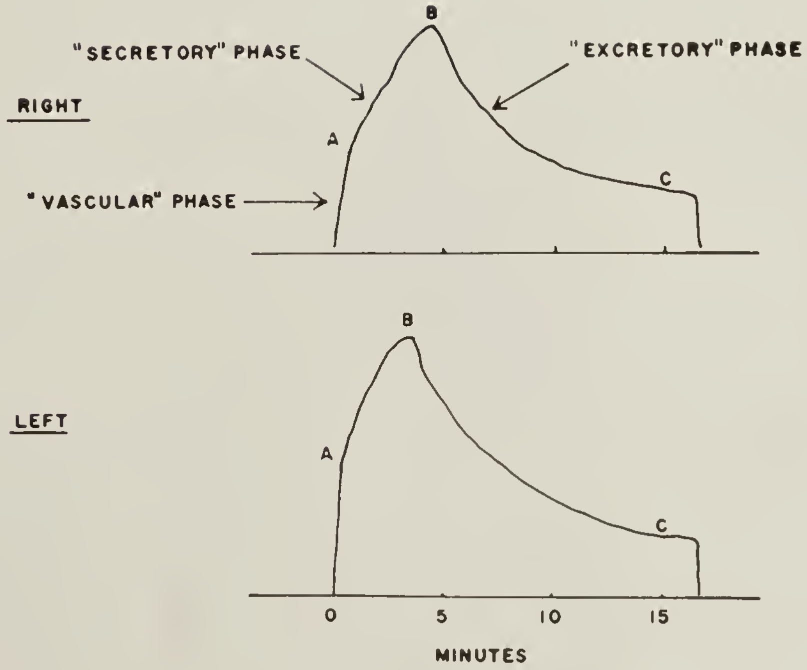

Figure 9. *Normal Hippuran renogram. See text.*

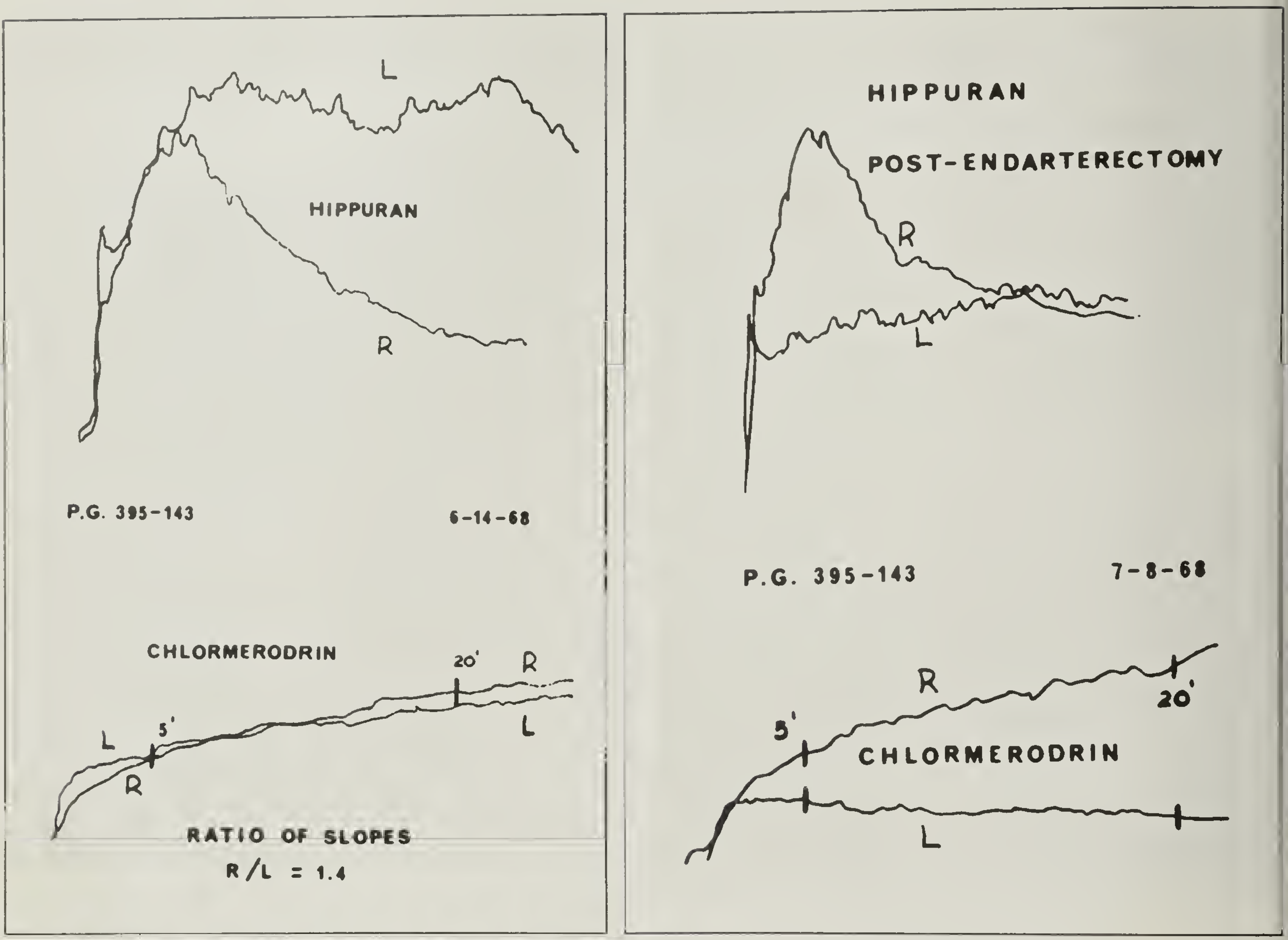

Figure 10. *(A) Same patient as in Figures 5 and 6. The Hippuran renogram curves (top) are normal on the right side, but grossly abnormal on the left. Note the slow rise to the peak and the very delayed and irregular excretion curve on the left. Since the urogram ruled out obstructive uropathy, this extremely slow and irregular excretion suggests low urine output from some other cause and the first part of the curve suggests decreased renal blood flow. The chlormerodrin curves are only slightly different, but the uptake slope of the right side is definitely better than the left with a ratio of 1.4 which is abnormal, and indicates the better blood flow to the right kidney. (B) Same patient as 10A. After endarterectomy, this patient had a recurrence of severe hypertension with encephalopathy. The Hippuran renogram remained normal on the right side, but on the left there was marked deterioration with only a slight upward slope which the arteriogram shows was due to collateral blood flow to the upper pole, as the main renal artery was occluded. The chlormerodrin curve shows an even more striking change as the left side now has a negative slope.*

Kidney Scan

Since radioactive chlormerodrin accumulates in the functioning tubular cells, a scan of the kidneys made one hour or more after the intravenous injection of chlormerodrin will demonstrate the distribution of the functioning renal parenchyma and the relative amount of function between the two kidneys.[11,16] It has been shown that the overall difference in uptake between the kidneys is roughly proportional to the blood flow and hence, may be used in the evaluation of hypertensives. However, its main value is that it can show segmental areas of nonfunction which may not be apparent on other radiographic and isotope studies. This is illustrated in Fig. 11.

A kidney scan will detect but not show the nature of a mass lesion. However, a focal area of hyperplasia or fetal lobulation (which may be mistaken for a mass lesion on radiographic studies) will be shown to be normal renal tissue.

Although this paper is primarily concerned with medical diseases, it should be stressed that the kidney scan is very useful in evaluating trauma. It is a most sensitive indicator of mild trauma and clearly shows the functioning portion of a traumatized kidney.

The scan is very useful for localizing the kidneys for needle biopsy. With the patient in the biopsy position, the kidney can be precisely outlined on the patient's back with skin paint.

Summary

Radiographic examinations such as rapid sequence urograms, infusion urograms and infusion urograms combined with tomography frequently add information about the anatomy and function of the urinary tract beyond that available on conventional urograms. Isotope tests (renograms, renal scans and chlormerodrin accumulation tests) may yield complimentary information of a type not available from the radiographic examinations. Proper selection of these examinations in a particular patient is quite helpful in establishing a precise diagnosis.

REFERENCES

1. Schencker, B.: *Further Experience with Drip Infusion Pyelography. Radiology,* 1966, 87, 304–308.

2. Friedenberg, M. D., and Carlin, M. R.: *The Routine Use of Higher Volumes of Contrast Material to Improve Intravenous Urography. Radiology,* 1964, 83, 405–413.

3. Lasser, E. C.: *Basic Mechanisms of Contrast Media Reactions. Radiology,* July 1968, 91.

4. Bornhurst, R. A., Heitzman, E. R., and McAfee, J. G.: *Double-Dose Drip-Infusion Cholangiography. JAMA,* November, 1968, 206, 1489–1494.

5. DeNosaquo, N.: *Reactions to Contrast Media. The American Medical Association Registry on Adverse Reactions. Radiology,* July 1968, 91, 92–95.

6. Leinbach, L. B.: *The Utilization of the Intravenous Pyelogram in a Study of Kidney Function. The Radiologic Clinics of North America,* 1965, Vol. III, No. 1, 41–49.

7. Hotovy, E., Losconci, A., and Lakos, J.: Serial Nephroangiography in Hypertension, *Acta Radiologica Diagnosis,* March 1968, 7, 177–191.

8. Stejskol, R. E., Straub, E. J., Loken, M. D., and Amplatz, K.: *The Value of the Urea Washout Test in the Assessment of Curable Renovascular Hypertension. Am. J. of Roentgenol., Rad. Therapy and Nuclear Med.,* 1964, 92, 1397–1408.

9. Eyler, W. R., Clark, M. D., Garmen, J. E., Rian, R. L., and Meininger, D. E.: *Angiography of Renal Areas, Including Comparative Study of Renal Arterial Stenosis in Patients with and without Hypertension. Radiology* 78, 1962, 879–891.

10. Schwartz, D. J., and White, T. A.: *Stenosis of Renal Artery. An Unselected Necropsy Study,* Brit. M. J., 1964, 2, 1415–1421.

11. Wagner, H. N.: *Principles of Nuclear Medicine.* W. B. Saunders Company, Philadelphia, 1968, Chapter XIII.

12. Taplin, G. V.: The Sodium Iodohippurate-I^{131} Renocystogram: Revised Interpretation, Terminology and Technique, in Croll, M. N., and Brady, L. W.; Recent Advances in Nuclear Medicine, Appleton-Century Crofts, New York, 1966, 20–27.

13. Clark, M. D., Eyler, W. R., DuSault, A. B. Kochkodan, E. J., and Caldwell, J. R.: *The Renogram in Hypertension. Radiology,* 1967, 89, 667–675.

14. Levitt, J. I., Amplatz, K., and Loken, M. K.: *Renovascular Hypertension. Correlation of Surgical Results with Certain Predictive Tests. Radiology.* September 1968, 91, 521–528.

15. Wall, A. C., and Whalen, T. J.: *Criteria for Screening the Hypertensive Patient with Renal Artery Occlusion. JAMA,* 1965, 192, 1125–1129.

16. Quinn, III, J. L., and Maynard, C. D.: *Renal Radioisotope Scintiscanning. The Radiologic Clinics of North America,* 1965, Vol. III, No. 1, 65–74.

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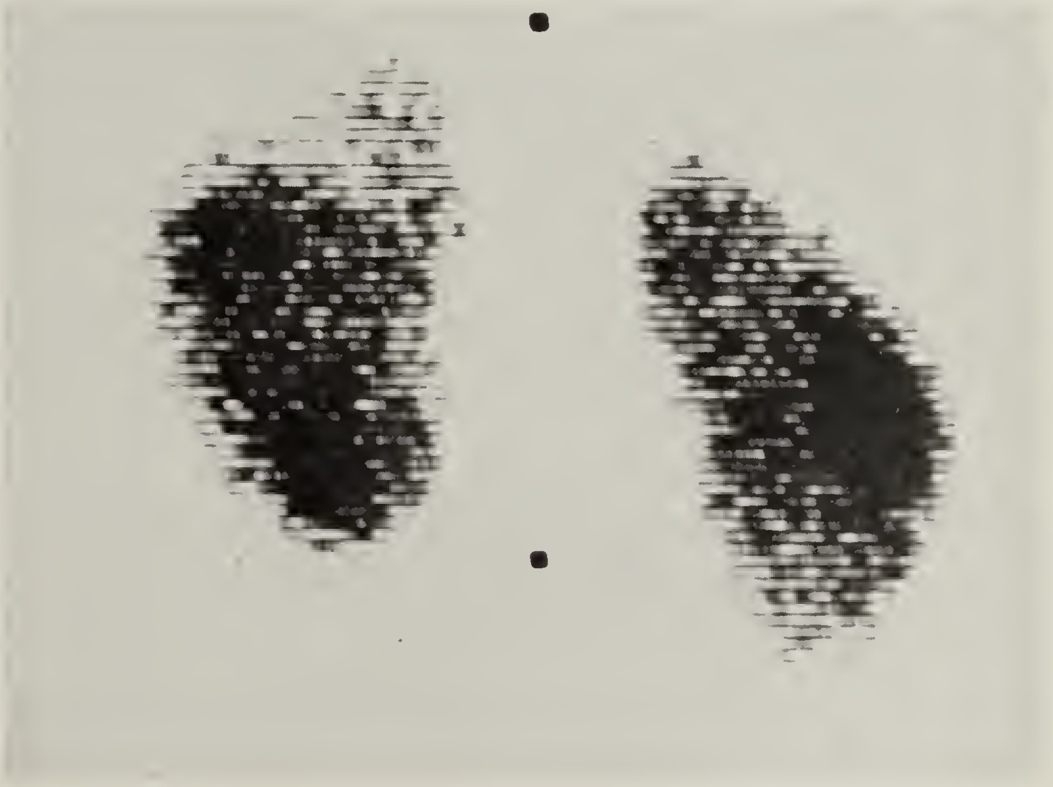
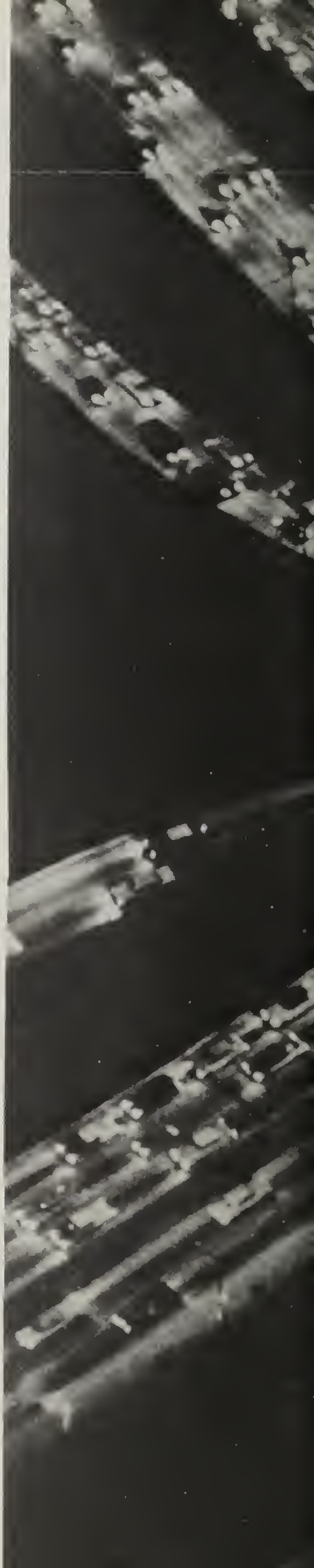
Figure 11. *Eight-year-old boy with leukemia and a left lower quadrant mass. The urogram showed large kidneys with fairly good and equal function and no evidence of segmental defects. The initial scan (A) shows that both kidneys are enlarged and that there is much better function on the right than the left, though both show irregular segmental defects. The left kidney was then irradiated and two weeks later the scan was repeated. (B) Note that the defect at the upper pole of the right kidney is unchanged, but there has been a marked improvement in the function of the left kidney.*



PENNSYLVANIA
MEDICINE feature



AGGRESSIVE DRIVING

VAN BUREN O. HAMMETT, M.D.
Philadelphia

This communication has been stimulated by a common phenomenon of everyday American life—the frequent spectacle of an automobile being driven in what is plainly an aggressive manner. The drivers are doing something more than using their vehicles as a means of transportation. They are also expressing aggression, as will be described in more detail shortly. A correlative phenomenon is the seemingly paradoxical lack of concern about such aggressive driving on the part of other persons. One hears an occasional epithet addressed to such drivers, but it is a striking fact that for the most part the American public seems not to pay much attention to this type of driving, and seems to accept it as part of contemporary life. Considering the very real danger which attends the aggressive use of a 3,000 pound machine, this seeming unconcern is rather remarkable and demands some sort of explanation.

The automobile is particularly well adapted for the expression of aggression, in that the driver needs only to press lightly with his foot upon the accelerator (an act which requires no more force than that necessary to pull the trigger of a revolver) and by so doing he can propel an object of great mass at high speed. This can be done as effectively by the small and weak as by the large and strong, so that the modern automobile when used aggressively is an even more potent "equalizer" than the Colt .45 of Western Frontier days.

In order to establish the fact that aggressive driving is a common aspect of everyday life a simple study was carried out. The following criteria were established, and whenever observed were considered as instances of aggressive driving:

1. Racing: accelerating with unnecessary vigor away from adjacent cars, whether from a traffic light or as cars proceed along a multiple-lane roadway.
2. Weaving: cutting in and out from one lane to anither, on multiple-lane roadways, in order to gain some advantage in forward progress over other cars.
3. Pressing for advantage: this occurs as streams of cars from multiple directions converge on a congested area, such as a traffic circle or a complex intersection: a driver may aggressively cut ahead of other cars in this situation.
4. Cutting across in front: as two cars approach from opposite directions, one cuts suddenly across the path of the other in order to make a turn.
5. The same as 4 above, except that the two cars have been going in the same direction, and the car on the left cuts suddenly across in front of the car on the right.
6. Pushing from the rear: this consists of overly-close following which seems to say "get moving or I'll ram you."
7. Passive aggression: this consists of driving the car so that it straddles the line between two lanes on a multiple-lane roadway, thus preventing drivers behind from ordinary passing.

Observing and identifying these types of aggressive driving did not prove to be difficult. Whenever the driving behavior was equivocal—that is to say, not a clearcut instance of aggressive driving—it was discarded and was not recorded. The observer drove twenty-four miles daily making observations and a record was kept until 100 clearcut instances o aggressive driving, as defined above, had been observed. This required thirty-four days of observation over the twenty-four mile route; thus approximately three unequivocal instances of aggressive driving were observed each day.

Another striking phenomenon had emerged by the time of completion of the study: *not one single accident was seen to occur* as a consequence of the 100 instances of aggressive driving observed. There was not even so much as a minor collision, although in many cases the driving involved a considerable degree of potential for collision. At the time of beginning the study the possibility of collision had seemed obvious and quite real, so that it had been expected that collisions would occur. As the total number of observed acts of aggressive

Absence of counter-aggression, skill determines avoidence of accidents

driving increased, the absence of actual collisions began to emerge as a puzzling phenomenon. This non-occurrence of accidents cannot be explained by operation of the laws of chance: 100 instances without collision is far too large a number to be explained by the factor of chance.

We must give consideration to the factor of skill of the individual drivers involved. The drivers observed in the course of this study are members of the "fraternity of commuter-drivers:" they regularly drive back and forth between the suburbs and the city during the rush hours when traffic is heavy, yet nonetheless drive at relatively high speeds. They display individually and collectively a high degree of driving skill. Yet skill alone does not seem enough to explain the remarkable absence of collisions in association with aggressive driving behavior, for skill at anything is usually in the service of emotionally determined motives and human nature being what it is, we would suppose that a significant proportion of persons would be moved to compete—rather than to yield—when confronted with aggressive behavior on the part of others. If this were to occur skill would not suffice to avert collisions. But in the course of observing the 100 instances of aggressive driving behavior, *not one instance of counter-aggression was observed.*

It is this absence of counter-aggression combined with skill which appears to be the determining factor in the avoidance of accidents. It was observed that in all instances the driver of the threatened vehicle took evasive action, in order to avoid collision; not once was a driver observed to react to an aggressive threat with counter-aggressive behavior. On the contrary, in every instance the threatened driver slowed down, braked, changed his course somewhat or swerved abruptly in order to make way for the driver who was acting aggressively. Thus it appears that the phenomenon of aggressive driving consists of more than the behavior of the aggressor: it also contains the reaction of the other driver who is threatened by the aggressor. *Two components are involved: the action of the aggressor, and the action of the one threatened by the aggression.*

This consistent behavior pattern, which involves collaboration between the aggressor and the one threatened (and which is extremely successful in averting actual collision), seems to be an example of *ritualization.* Lorenz* has written at length of the development of ritual in the behavior of insects, birds, animals and man. He has shown that the ritual behavior allows some symbolic expression of aggression, while inhibiting its overt expression in fighting which might result in serious injury, or even death, for the participants. He has further shown that such ritual behavior, derived initially from aggression, becomes eventually the basis for social ties which play an important part in uniting flocks of ducks, gaggles of geese, and packs of wolves. So too with man. What has been described here is an example of ritual behavior involving the use of the automobile as an instrument of aggression, and consisting of an aggressive gesture and a submissive response. It is not as dangerous as it appears to be. In fact, it is highly effective in averting actual collision, and it may even serve in a very subtle way to unite the participants in the "fraternity of commuters."

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* Lorenz, K.: *On Aggression,* Bantam Books, Inc., New York, 1967.

PHOTOS: WORLD HEALTH

Dr. Hammett is chairman of the department of psychiatry at Hahnemann Medical College and is a fellow of the American College of Psychiatrists and of the American College of Physicians. He is on the staffs of the Institute of Pennsylvania Hospital and of Hahnemann Hospital.

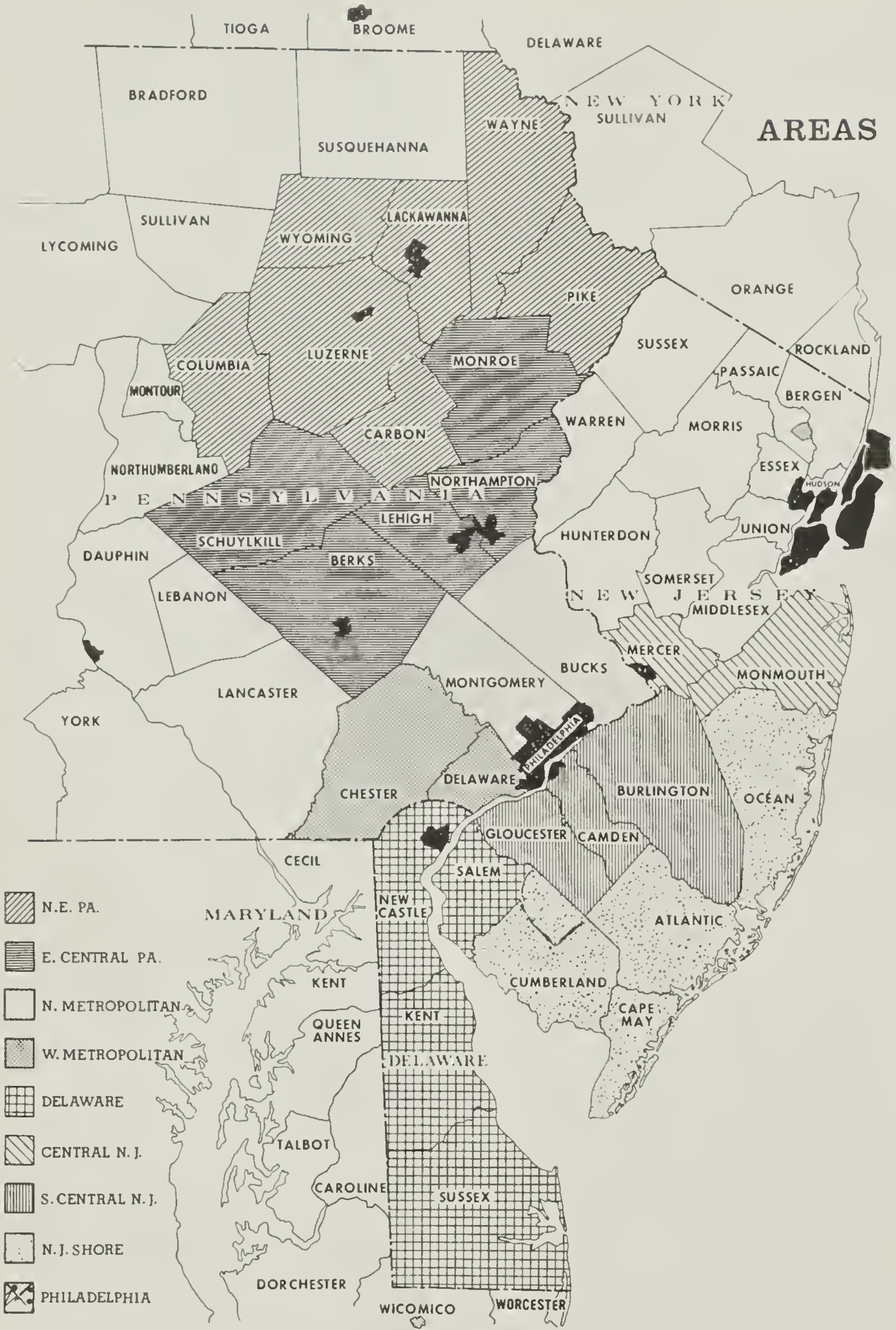

FIGURE 1

Greater Delaware Valley Regional Medical Program

C. ALLEN LAFFERTY
Haverford

The background and early history of Regional Medical Programs were fully described in the May, 1969, issue of Pennsylvania Medicine (Susquehanna Valley Regional Medical Program, by Robert M. Fisher). The article points out that the House of Delegates of the Pennsylvania Medical Society accepted the recommendation of the Special Committee on Heart Diseases, Cancer and Stroke that Pennsylvania be divided for the purposes of Regional Medical Programs into three regions centered around the medical schools in Pittsburgh, Hershey and Philadelphia.

The deans of the five medical schools in Philadelphia took the lead in planning the Greater Delaware Valley Regional Medical Program. Following a grant to the University City Science Center from the Division of Regional Medical Programs, U.S. Public Health Service in April, 1967, GDVRMP was established and a nucleus staff was employed.

GDVRMP's Program Committee, consisting of the deans of the five medical schools asked the medical associations and health officers of Delaware and New Jersey as well as Pennsylvania to name advisors to serve on a regional advisory group. Later, this invitation was extended to voluntary health organizations and planning organizations. The medical associations, health officers and the health and planning organizations were then asked to nominate one representative each to serve on the program committee. Subsequently, the Philadelphia College of Osteopathic Medicine accepted a long-standing invitation to participate and the present eleven-man program committee came into being.

The planning efforts of the program committee and staff moved simultaneously along several tracks. The boundaries of the thirty-two county region with a population of some 8.5 million were established and working relationship clarified with bordering regional medical programs, such as Susquehanna Valley, New Jersey, Maryland and Central New York. Although the boundaries remain somewhat flexible, the region has taken definite shape (Figure 1).

Within the region, twelve areas were identified that seem to have coherence and a community of needs or interests, based on patient flow and other medical or health considerations. Of these, six have established area-wide committees involving 334 health leaders and experts for area and regional planning.

At the same time, thirteen regional planning groups were organized to provide technical and professional experience for overall planning for the entire region. These groups are concerned with heart disease, cancer, stroke, continuing education, health care of the poor, data analysis and monitoring, health behavior, operations research, respiratory diseases, cancer chemotherapy, radioherapy and blood. These groups, comprising more than 150 persons, about half of them from medical schools, identify needs and priorities, conduct tudies, prepare special reports and guidelines, and suggest programs and demonstrations.

One of the first major projects was a urvey of physician needs in continuing ducation. It was conducted by the Task Force on Continuing Education in cooperation with the Educational Testing Service of Princeton, New Jersey. Another was the preparation of a fact book containing data and statistics compiled under the supervision of the committee on data analysis and monitoring. As the program developed, many of these hirteen groups (or their members individually) have been called on to review grant applications for both planning and operational projects. During this phase, he six medical schools have provided a wide variety of resources for manpower, consultation, planning and evaluation or many aspects of the program.

In the early days of the program much hought and effort went into developing he regional organization and determinng the best method for its operation. The program committee, which meets once a month, is the policy-making and operating body for the program. It receives advice and guidance from the regional advisory group which now conists of fifty-three members. Each estabished area-wide committee nominates at east two members to serve on the regional advisory group. In addition to he deans of the medical schools and representatives of the five special groups, here are public members on the advisory group representing a wide range of interests and backgrounds.

The staff of the regional office which now has grown to eleven provides specialized services throughout the region from its headquarters in Haverford, Pa. One of the principal planning bodies is he coordinating committee made up of he chiefs of regional medical program activities from each of the five medical chools. The coordinating committee also advises the executive director on organizational and administrative matters.

The regional staff provides professional and administrative support services for the entire program. In the areas, liaison officers staff area-wide committees and work to foster understanding and involvement of area residents so that the needs, resources and priorities of the area will be reflected in the program. Perhaps the most important function of the regional staff is to stimulate, develop and review proposals for both planning and operational projects. So far, nearly 100 proposals have been received. On April 1, 1969, the first operational proposals were approved and funded by the Division of Regional Medical Programs. A second important responsibility of the regional staff will be to conduct continuing evaluation of these projects.

During the first two and a half years, the program has funded ten planning or demonstration projects. Three of these are support for comprehensive health planning programs for Philadelphia, northeast Pennsylvania and South Jersey. Already mentioned was the regional physicians' survey on continuing education, the results of which are now being tabulated. A report will be issued shortly. The survey is designed to play an important role in determining the kinds of programs for continuing education of physicians, an important phase of GDVRMP.

One of the earliest planning grants was to the Philadelphia College of Physicians to develop a medical library to serve the entire region. The planning has already resulted in the establishment of the Mid-Eastern Regional Medical Library. Another early grant was to the University City Science Center to plan a Regional Chronic Uremia Program. The group has studied the magnitude of the problem and is making recommendations for an operational project to deal with important segments including some dialysis, transplantation and registries.

In Wilmington, a grant has gone to the Delaware Curative Workshop to develop a series of monthly instructional movies on cardiovascular disease for patients and their families. The Committee on Emergency Medical Care, Philadelphia County Medical Society received a grant to prepare a pilot demonstration film on "Airway Defects" to be used in training police and firemen for dealing with medical emergencies. A sub-committee of the task force on continuing education has received a grant to conduct a pilot project to test the feasibility of using the self-administered "Pap" smear kit to increase the number of samples from women in ghettoes. An important part of the project is the training of indigenous workers to persuade the women to use the kit.

Five operational projects have been funded by the division of regional medical programs and are in operation. They represent the beginning of the pay-off for the two and one half years of planning effort. The cost of these five projects is just under $1 million.

They include:

(1) *Coronary Care Training Course at Wilkes-Barre General Hospital*
The director is David Rimple, M.D.

The project is for an eight week course for nurses for in-depth training in acute coronary care. Up to eight nurses will be enrolled in each course. The course is intended to give the nurses thorough instruction and experience in coronary intensive care. Unusual features include the use of video tape and follow-up seminars. The course will be given four times a year. The project also provides for intensive instruction in pulmonary problems. The faculty is selected from Wilkes-Barre General Hospital, Nesbitt Memorial Hospital, Wyoming Valley Hospital and Kings College.

(2) *Coronary Care Training Courses at Reading Hospital*
The sponsor is James McShane, M.D.

This is a four week course to train twelve to twenty-four nurses in acute coronary care. Physicians concerned with directing coronary intensive care units are invited to attend as well as the nurses. The courses will be given four times a year. In addition to the Reading Hospital, other hospitals participating in the program include St. Joseph's Hospital and Community General Hospital.

(3) *General Intensive Care Training Course at Allentown Hospital*
The sponsor is Fred Fister, M.D.

This is an eleven-week course to be given twice a year to provide basic training for sixteen to thirty-two nurses in the care of acute medical problems including acute myocardial infarction, acute stroke and head trauma, acute care in respiratory failure and acute renal failure. The major goal of the program is to provide a pool of nurses capable of serving in units for the care of any single condition or in multi-purpose areas. The course is open to interested hospitals in the area. Instructors are selected from other area hospitals and a medical school in addition to Allentown Hospital.

(4) *Regional Chronic Pediatric Pulmonary Disease Program*
The director is Guilio Barbero, M.D.

This is a combined planning and operational program involving Hahnemann Medical School, Temple University School of Medicine and the University of Pennsylvania School of Medicine. Satellite clinics will be at Harrisburg Polyclinic Hospital, Mercy Hospital in Wilkes-Barre and Wilmington Medical Center. Among the goals of the program are to increase knowledge in the pathophysiology of chest diseases, develop an acute diagnostic program, develop satellite clinics in outlying areas, develop expertise among physicians and other health personnel for long-term home care programs and to provide early diagnosis. A standard history and physical examination form and a case registry will be developed. Training will be provided for medical students, medical graduates and other health professionals.

(5) *Regional Re-training Program for Women Physicians*
Director of program is Glen R. Leymaster, M.D., president and dean, Women's Medical College of Pennsylvania

This is a program to retrain women physicians who wish to return to the practice of medicine after raising a family. Without such a program, physicians who are presently inactive would return to practice more slowly or not at all. The curriculum is tailored to individual needs and is based on three full days per week or the equivalent for nine months. With the support of the Macy Foundation, Women's Medical College developed the program, identified personnel to carry it out and determine by a survey individual physicians interested in taking the course, and interviewed promising candidates. The program began with a group of ten women but potentially could become much greater.

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PENNSYLVANIA MEDICINE cardiovascular briefs

Management of Thrombophlebitis and Pulmonary Embolism

Part II

▪ Meyer Naide, M.D., Director, Division of Vascular Diseases, Graduate Hospital of the University of Pennsylvania, and David Naide, M.D., Division of Vascular Diseases, Graduate Hospital of the University of Pennsylvania, Philadelphia, are questioned by William G. Leaman, Jr., M.D.

What are the important early signs of thrombophlebitis?

Early subtle filling out of the concavity behind the medial malleolus and a sense of fullness or firmness on gentle palpation of the calf may be helpful in early diagnosis. There may or may not be calf tenderness and a positive Homans' sign early. A slight increase in temperature or pulse rate may be significant. The diagnosis is easily made in a classical case, but attention to the above signs may help to diagnose patients prior to pulmonary embolism.

What other entities are included in the differential diagnosis of thrombophlebitis?

A ruptured plantaris muscle and/or tendon is not always easy to differentiate from thrombophlebitis. Ruptured plantaris or gastrocnemius muscle may follow vigorous or relatively minor activity. The patient presents with severe pain, a limp, marked tenderness in the calf and ecchymoses about the calf, which may appear early or may not be present for five to seven days. If ecchymoses appear late, the discoloration may become evident distal to the calf. Other considerations in the differential diagnosis are lumbosacral root irritation, which may cause lower extremity discomfort with or without backaches, and a Baker's cyst which may simulate thrombophlebitis.

Is venography often performed?

We have not found this of much value in diagnosing thrombophlebitis, as the diagnosis is usually evident clinically. However, there are certain situations where the diagnosis is questionable or perhaps where a source of pulmonary embolism is under investigation. In these situations venograms may be helpful.

How do you treat deep thrombophlebitis?

Bed rest with leg elevation and heparin are the main treatment measures. We prefer the intravenous route for the administration of heparin, and the "average" dose of the drug would be 7500 units every six to eight hours. This amount is modified according to the severity of the phlebitis, the size of the patient and the Lee White coagulation times. Heparin is continued for ten to twenty-one days. If heparin cannot be used, such as after recent gastro-intestinal bleeding, then Dextran* is often helpful because of its anti-inflammatory effects, as well as its ability to coat blood cells and blood vessels.

What is the dose of Dextran when it is used in treating thrombophlebitis?

We use low molecular weight Dextran, a 500 cc. bottle being given over three to four hours twice a day for three days. This may be given in association with heparin in the more severe and resistant patients.

How common is thrombophlebitis as a presenting symptom of an occult malignancy?

This is not uncommon in our experience. Any thrombophlebitis which is recurrent, particularly in a short period of time, migratory from one leg to the other, deep or superficial, and/or which is resistant to the usual type of treatment, should raise one's suspicion for occult malignancy. Any patient who falls into the above categories should have, in addition to routine studies, an IVP, barium enema, upper G-I series, pelvic examination, etc.

If there is high suspicion of pulmonary embolism and chest x-ray and lung scan are negative, what do you do next?

In this situation, a pulmonary arteriogram may give a definitive diagnosis, particularly if done within the first few days. It is important to attempt to establish a definite diagnosis, since treatment can be guided accordingly. Enzyme studies are usually not helpful in diagnosis. With a large pulmonary embolus, signs of right-sided heart strain in the electrocardiogram may help in the diagnosis.

Are there new methods to bring about lysis of blood clots, such as pulmonary emboli?

Experimentally, drugs, such as Urokinase and a new highly purified Streptokinase, have been shown to bring about clot lysis, but these are not yet of proved value and are not clinically available.

▪ William G. Leaman, Jr., M.D. edited this brief for the Council on Education and Science, in cooperation with the Pennsylvania Heart Association.

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* Abbott Laboratories

Safeguard Against Oral Cancer

HOW MUCH OF A PROBLEM IS ORAL CANCER IN THE UNITED STATES?

Cancers of the oropharynx comprise 4 per cent of all cancers in the United States. This means more than 7,000 deaths and 12,000 new cases this year. The five year cure rate is less than one-third of all cases, worse than any other cancers except the lung.

WHY IS THE FIVE-YEAR CURE RATE SO POOR?

This is due mainly to the fact that most of the lesions do not come to diagnosis until they are larger than two centimeters in diameter and there is regional node involvement. With such involvement the five year survival is less than 25 per cent. If there is no regional involvement the 5 year survival is better than 75 per cent. Early diagnosis is the key.

WHO IS RESPONSIBLE FOR MAKING AN EARLY DIAGNOSIS?

The greater responsibility must be borne by the first professional who examines the mouth. The patient, of course, has some responsibility but to make this meaningful he must be taught what to watch for. He must be told to report at once (1) any sore or ulcer that does not promptly heal (2) white scaly areas in the mouth (3) localized swelling of lips, gums or other mouth structures—with or without pain (4) any unexplained bleeding in the mouth and (5) any numbness or loss of feeling in any part of the mouth.

ISN'T IT THE DENTIST'S JOB TO DIAGNOSE ORAL CANCER?

Of course it is—and the physician's also. Physicians should examine their patients at regular intervals and a thorough systematized examination of the oral structures should be a part of such studies. This is specially important in those patients over 35 years. Careful search is made for fleshy buds of tissue, leukoplakic plaques, infiltrated ulcers, fissures, induration and scaling lesions. Any abnormality, no matter how insignificant or benign looking, should have further study.

HOW IS THE ORAL EXAMINATION CARRIED OUT?

First inspect the head and neck for moles, asymmetry and swelling. Palpate the neck for nodes and the lips for induration. Inspect the buccal mucosa including the labial-gingival area. Inspect the tongue at rest and protruded. Holding the tongue with gauze, inspect both lateral borders in their entirety. Palpate tongue and entire floor of the mouth. Inspect and palpate hard and soft palates. Inspect and palpate both fauces with special attention to the tonsils if present.

HOW IS THE ORAL LESION MANAGED?

The physician must decide whether to study the lesion further by exfoliative cytology or to biopsy it. If the lesion is at all suspicious a biopsy should be done without delay. It is usually best to send the patient to an oral surgeon or the head and neck surgeon who would be responsible for definitive treatment.

WHEN DO YOU USE CYTOLOGY?

Cytologic examination is used where the lesion is so insignificant or the clinical picture so inconclusive as to make a biopsy unwarranted. In other words, where you ordinarily would not do a biopsy. Where a biopsy is to be done, a cytology smear can serve as a useful supplement to the biopsy. When a patient refuses biopsy a smear should certainly be done. In summary, oral cancer can be diagnosed only by biopsy. A cytologic smear is an adjunct to the diagnosis. It must be used to speed the diagnosis, never to delay. Your patient does not have the time.

CANCER FORUM – presented cooperatively by the PMS Council on Education and Science, The Pennsylvania and Philadelphia Divisions of the American Cancer Society, and the Cancer Control Section, Pennsylvania Department of Health.

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A small fraction of the hormonal agents in oral contraceptive pills has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	*Mortality Rates*		*Hospitalization Rates (Morbidity)*
	Age 20-34	*Age 35-44*	*Age 20-44*
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately past partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

Before prescribing see complete prescribing information.

Where "The Pill" Began

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Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely. Try Dimetapp. It clearly works.

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Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

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(dyphylline)

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DOSAGE: Usual adult dose is 1 tablet 3 or 4 times a day. Dosage may be increased up to a maximum of 2.4 grams per day when necessary.

PRECAUTIONS: Use with caution in the presence of acute cardiac disease, severe renal and hepatic disease, severe myocardial damage, hyperthyroidism and glaucoma. Combining with sympathomimetic drugs can cause excessive CNS stimulation. **SIDE EFFECTS:** High dosage for long periods may cause mild headache or slight nausea which can usually be controlled by dosage reduction.

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continuing education

A list of educational opportunities offered to physicians in the interest of maintaining their competence and skill. Unless otherwise indicated, a courses are designed for physicians engaged in primary patient care.

CARDIOVASCULAR DISEASE

January 7, 1970; Allentown

I/AMA—**How to Avoid Code Blues? (Cardio Respiratory Collapse)**; (8 weeks Education Program—1st Wed. ea. mo.); by U. of Pa.; at Sacred Heart Hosp.; 3 hrs. AAGP Credit. Contact Robert F. Brennan, M.D., Sacred Heart Hosp., Allentown 18102.

January 8, 1970; Allentown Hospital

I/AMA—**Heart Sounds** (Program of Continuing Medical Education, 2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

January 22, 1970; Pottsville

I/AMA—**Intractable Congestive Heart Failure** (Continuing Education Program—3rd Wed. 8 mos.); by Hahnemann; at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

January 27, 1970; Chester

I/AMA—**Anticoagulants in Cardiovascular Disorders** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 6, 1970; Philadelphia (repeat May 1, 1970)

C/AMA—**Cardiopulmonary Resuscitation Instructors' Course:** by Pa. Heart Assoc. and Heart Assoc. of Southeastern Pa.; at Jefferson; 8 hrs. AAGP credit approved; $15 fee. Contact John H. Killough, M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

CHEST DISEASES

January 21, 1970; Reading

I/AMA—**Respiratory Failure** (Continuing Education Program—3rd Wed. 8 mos.); by Hahnemann; at Community General Hosp. Contact Paul K. Stolz, M.D. Dir. Cont. Educa., Community Gen. Hosp., 135 N. 6th St., Reading 19601.

January 21, 1970; Scranton

I/AMA—**Pre and Postoperative Problems in the Patient with Pulmonary Disease** (Program of Continuing Medical Education—3rd Wed. ea. mo.; 8 mos.); by Jefferson and Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

"CODE KEY"

C—Consecutive days
I—Intermittent
O—Circuit
PG—Postgraduate Traineeship
R—Radio
TV—Television
S—Designed for full-time specialists
AMA—AMA Accredited Institution
C E S—Council on Education and Science, Pennsylvania Medical Society
Hahnemann—Hahnemann Medical College and Hospital
Hershey—Milton S. Hershey Medical Center
Jefferson—Jefferson Medical College of Philadelphia
Penn-Grad—University of Pennsylvania, Division of Graduate Medicine
Pitt—University of Pittsburgh School of Medicine
Pitt P.H.—University of Pittsburgh Graduate School of Public Health
Penn State—Pennsylvania State University
Temple—Temple University Health Sciences Center
U. of Pa.—University of Pennsylvania School of Medicine
Woman's—Woman's Medical College of Pennsylvania

February 4–March 25, 1970; Philadelphia

I/AMA—**Diagnosis and Management of Chronic Respiratory Disease** (Each Tuesday—8 weeks); at Albert Einstein Medical Center; 20 hrs. AAGP credit; $75 fee. Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Rds., Philadelphia 19141.

ELECTROCARDIOGRAPHY

January 25 and February 1, 1970; Pittsburgh

I—**Electrography—Newer Concepts;** by Pitt, West Penn and Shadyside Hosps.; at West Penn (1/25/70) and Shadyside (2/1/70); 5 hrs. AAGP credit, $15 fee (both Sundays). Contact John B. Hill, M.D., West Penn Hosp., 4800 Friendship Ave., Pittsburgh 15224.

ENDOCRINOLOGY

January–May, 1970 (3rd Thurs. ea. mo.); Bethlehem

I—**Endocrinology: Medical and Surgical Aspects;** at St. Luke's Hosp., by Jefferson; 24 hrs. AAGP credit; $24 fee (6 seminars), $7 ea. Contact Michael L. Sheppeck, M.D., Med. Dir., St. Luke's Hosp., Bethlehem 18015.

January 15, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Pituitary Gland** (Program of Continuing Medical Education); By Jefferson and Penn State at St. Luke's Hospital; 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

January 22–23, 1970; Erie

I/AMA—**Current Concepts of Etiolog and Treatment of Diabetes Mellitus** (Pro gram of Continuing Medical Education— 1st hr./1st day; 2 hrs./2nd day; 10 weeks every other Thurs. evening and Fri. morning); by Jefferson and Penn State; at St Vincent Hosp.; AAGP credit approved Contact John H. Killough, Ph.D., M.D. Assoc. Dean, Jefferson, 1025 Walnut St. Philadelphia, 19107.

January 27, 1970; Reading

I—**Obesity** (1969–70 Continuing Education Program; 4th Tues. ea. mo.; 8 mos.) at St. Joseph's Hosp; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

February 3, 1970; Chester

I/AMA—**The Problem Diabetic** (Program of Continuing Medical Education —Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

GASTROENTEROLOGY

January 8–9, 1970; Erie

I/AMA—**Diagnosis and Treatment of Gastric and Duodenal Ulcers** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp., AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean; Jefferson, 1025 Walnut St., Philadelphia 19107.

March 24, 1970; Reading

I—**Hepatitis** (1969–70 Continuing Education Program; 4th Tues. ea. mo.; 8 mos.); at St. Joseph's Hosp.; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

GENERAL MEDICINE

Every Thursday; Hazleton State General Hospital

I—**Program of Continuing Medical Education by Hazleton Branch, Luzerne County Medical Society.** Contact Robert Gunderson, M.D., Suite 412 Northeastern Building, Hazleton, Pa. 18201.

November 5–April 15, 1970; Lock Haven Hospital

I—**Current Medical & Surgical Concepts** (Program of Continuing Medical Education—Altern. Wed., 10 sessions); by C E S, 30 hrs. AAGP credit applied for; $25 fee ($5 single session). Contact

Co.M.E., Pennsylvania Medical Society, Taylor Bypass & Erford Road, Lemoyne 17043.

January 7, 1970 to March 4, 1970; Shamokin State General Hospital

I—**Current Medical and Surgical Concepts** (Program of Continuing Medical Education—Every other Wednesday, 5 sessions); by CES; 15 hrs. AAGP credit approved; $25 fee, ($8 ea.). Contact Co.M.E., Pennsylvania Medical Society, Taylor Bypass & Erford Road, Lemoyne 17043.

January 13 to April 22, 1970; Gettysburg

I—**Current Medical and Surgical Concepts** (Program of Continuing Medical Education—Alternate Tuesdays and Wednesdays, 8 sessions); by CES; at Annie Warner Hosp.; 24 hrs. AAGP credit applied for; $25 fee ($5 ea.). Contact Co.M.E., Pennsylvania Medical Society, Taylor Bypass & Erford Road, Lemoyne 17043.

January 15, 1970; Altoona Hospital

I/AMA—**Newer Diagnostic Techniques in Radiology** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut St., Phila. 19107.

January 8, 1970; Pottsville Hospital

I/AMA—**Chronic Leg Ulcers** (Program of Continuing Medical Education—1st Thursday Each Month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

February 3, 1970; Lebanon

I/AMA—**Adolescent Psychiatry** (Continuing Medical Education Program—1st Tues.; 4 mos.); by Jefferson and Penn State; at Quentin Riding Academy; 2 hrs. AAGP credit; $8 fee ($35 for 4 sessions). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 5, 1970; Altoona Hospital

I/AMA—**Current Theories Concerning Causation of Cancer** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut St., Phila, 19107.

February 5, 1970; Pottsville Hospital

I/AMA—**Hepatitis** (Program of Continuing Medical Education, 1st Thursday each month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 5—April 16, 1970; DuBois Hospital

I—**Current Medical and Surgical Concepts** (Program of Continuing Medical Education—Alternate Wednesdays, 11 sessions); by C E S; 33 hrs. AAGP credit applied for; $25 fee ($5 single session). Contact Co.M.E., Pennsylvania Medical Society, Taylor Bypass & Erford Rd., Lemoyne 17043.

February 5, 1970; York Hospital

I/AMA—**What's New in Antibiotics and Cardiac Drugs** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

INTERNAL MEDICINE

January 22, 1970; York Hospital

I/AMA—**Current Therapy of Fluid and Electrolyte Homeostasis** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

February 2, 1970; Philadelphia

I/AMA—**Clinical Pharmacologic Basis of Use of Diuretics** (Program of Continuing Medical Education—1st Mon., 8 mos.); by Jefferson and Penn State; at Methodist Hosp.; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 4, 1970; Allentown

I/AMA—**How Will Central Venous Pressure Help My Patient?** (8 week Education Program—1st Wed. ea. mo.); by U. of Pa.; at Sacred Heart Hosp.; 3 hrs. AAGP credit. Contact Robert F. Brennan, M.D., Sacred Heart Hosp., Allentown 18102.

February 5–6, 1970; Erie

I/AMA—**Lymphomas, Diagnosis and Treatment** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

MALIGNANT DISEASE

January 7–February 4, 1970 (Repeat February 11–March 18, and April 22–May 27, 1970)

I—**Cancer Detection in Office Practice** (5 consecutive Wed. afternoons); by American Cancer Society; at American Oncologic Hosp.; 20 hrs. AAGP credit; limited to 8 per group. Contact Joseph G. Strawitz, M.D., Assoc. Dir., American Oncologic Hosp., Central & Shelmire Aves., Philadelphia 19111.

OBSTETRICS AND GYNECOLOGY

January 15, 1970; Wilkes-Barre General Hospital

I/AMA—**The Pill—More Than the Answer to a Maiden's Prayer?** (Program of Continuing Medical Education—One Thursday each month) by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

PEDIATRICS

January 29, 1970; York Hospital

I/AMA—**Present Concepts of Pediatric Immunology** (Program of Continuing Medical Education Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

PSYCHIATRY

Fourth Friday each month, September, 1969–June, 1970; Butler

I—**Physician-Community Psychiatrist Seminar**; by Mental Health Guidance Clinic of Butler Co.; at YWCA; Hour for hour AAGP credit. Contact Robert L. Eisler, M.D., Mental Health Guidance Clinic, 128 S. Main St., Butler 16001.

January 7, 1970–April 1, 1970; Pittsburgh

I—**Seminars in Patient Care** (2 hrs. a day, 1 day a week, 13 Wednesdays); by Staunton Clinic/Falk Clinic; 26 hrs. AAGP credit approved; $100 fee. Contact Rex A. Pittenger, M.D., Chief, Staunton Clinic, 3601 Fifth Ave., Pittsburgh 15213.

January 8–April 2, 1970; Pittsburgh

I—**Seminars in Patient Care** (2 hrs. a day, 1 day a week, 13 Thursdays); by Staunton Clinic/Falk Clinic; 26 hrs. AAGP credit approved; $100 fee. Contact Rex A. Pittenger, M.D., Chief, Staunton Clinic, 3601 Fifth Ave., Pittsburgh 15213.

January 9–February 20, 1970; Norristown State Hospital

I—**Medical Genetics with a Psychiatric Emphasis** (Program for Continuing Education for Psychiatrists—ea. Fri.; 7 weeks); $25 fee. Contact John D. Pruitt, M.D., Norristown State Hosp., Stanbridge and Sterigere Sts., Norristown 19401.

January 14–March 18, 1970; Philadelphia

I/AMA—**Clinical Seminars in Medical Psychiatry (Advanced)**; at Hahnemann—Each Wednesday, 10 weeks; AAGP credit applied for. Contact Paul J. Fink, M.D., Hannemann, 230 N. Broad St., Philadelphia 19102.

SURGERY

January 15, 1970; York Hospital

I/AMA—**Present Concepts of Surgical Ulcer Treatment** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D. M.D. Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

PENNSYLVANIA MEDICINE obituaries

○ **Max Abramovitz,** Philadelphia; University of Pennsylvania School of Medicine, 1911; age 80; died October 12, 1969. He was on the staff of Albert Einstein Medical Center, and for thirty-five years served as a physician for the Board of Education. He is survived by his wife, a son, three brothers and a sister.

○ **James R. Bartlett,** Pleasant Gap; Pulte Medical College, Cincinnati, O., 1911; age 86; died June 30, 1969. No survivors are listed.

○ **Frank R. Braden, Sr.,** Coraopolis; University of Pennsylvania School of Medicine, 1901; age 92; died October 6, 1969. He retired from the practice of medicine in 1955. He is survived by his wife, a son, Frank R. Braden, Jr., Coraopolis, and a brother.

○ **S. Jervis Brinton,** Avalon, N. J. and Palm Beach, Fla.; University of Pennsylvania School of Medicine, 1920; age 77; died September 19, 1969. He was on the faculty of Jefferson Medical College before his retirement and was a member of the Philadelphia College of Physicians. Surviving are his wife, a son and a daughter.

○ **Gilbert L. Dailey,** Harrisburg; University of Maryland Medical School, 1914; age 79; died October 19, 1969. He had been a practicing physician, an eye, ear, nose and throat specialist, for fifty-five years. He was a recipient of the PMS Fifty-year Award in 1964. Survivors include his wife, a daughter, three sons, including Edward G. Dailey, M.D., Harrisburg, and a sister.

○ **Sarah M. Davies,** Altoona; Woman's Medical College of Pennsylvania, 1911; age 80; died September 25, 1969. She was physician for the Altoona School District until her retirement in 1954. Surviving is a sister.

○ **David W. Devon,** Folsom; University of Pennsylvania, 1963; age 31; died June 15, 1969. He is survived by his wife.

○ **Robert T. Donnelly,** Philadelphia; Jefferson Medical College, 1905; age 85; died September 28, 1969. He was an ophthalmologist for fifty years prior to his retirement in July, 1969. He served in the Army during World War I. He is survived by his wife, three daughters and a son.

○ **Eula Eno,** Pottsville; Woman's Medical College of Pennsylvania, 1920; age 75; died September 23, 1969. She was a diplomate of the American Board of Obstetrics and Gynecology, and had been a medical missionary in China until 1940, when the Japanese invasion caused her to return to the United States. She was one of the women honored by Pennsylvania during "Women in Medicine Week" in 1967. Surviving are four sisters.

○ **Harry D. Evans,** Greenville, S. C.; Hahnemann Medical College, 1909; age 82; died October 2, 1969. He practiced more than fifty-five years in the Philadelphia area, and was emeritus professor of radiology at Hahnemann Medical College. He is survived by his wife and son, Harry D. Evans, Jr., M.D., Philadelphia.

○ **Brown Fulton,** Pittsburgh; University of Pittsburgh School of Medicine, 1916; age 76; died October 6, 1969. He had practiced medicine in the Morningside district of Pittsburgh for fifty-three years, and was a veteran of World War I. He is survived by his wife, two daughters, and a son, Robert E. Fulton, M.D., Pittsburgh.

○ **Arthur S. Haines,** Beaufort, S. C.; University of Pittsburgh School of Medicine, 1916; age 76; died October 4, 1969. He had practiced medicine in Pittsburgh prior to his retirement. Surviving are his wife and two stepsons.

○ **Eldin T. Johnson,** Ambridge; University of Cincinnati College of Medicine, 1938; age 58; died September 20, 1969. He had served as a captain in the Army Medical Corps during World War II. Dr. Johnson and his wife died as a result of an automobile accident. Surviving are a son, a daughter, his mother and sister.

○ **Albert A. Lucine,** Newton Square; Temple University School of Medicine, 1921; age 74; died October 9, 1969. He had practiced surgery in Philadelphia for forty-eight years. He died of injuries suffered in an automobile accident. He is survived by his wife, and two sons, Albert A. Lucine, Jr., M.D., Malvern, and Andrew D. Lucine, M.D., San Jose, Calif.

○ **Mario A. Luongo,** Pittsburgh; University of Naples, Italy, 1928; age 67; died September 26, 1969. Survivors include his wife, a sister, and his brother, Romeo A. Luongo, M.D., Pittsburgh.

○ **Carl J. Newhart,** Northampton; University of Pennsylvania Medical School; age 73; died October 10, 1969. He had been associated with Allentown Hospital throughout his fifty-year medical career, prior to retirement last year. He is survived by a daughter, four sons, including Carl K. Newhart, D.D.S., a brother and two sisters.

○ **Phyllis D. Schaefer,** Philadelphia; Cornell University Medical College, 1935; age 58; died September 23, 1969. She had been associated with the Philadelphia Board of Education since 1947, and had set up the program and classes for emotionally disturbed children. The first class was started in 1961. At present there are thirty-nine such classes. She was a fellow of the American Psychiatric Association and the American Academy of Child Psychiatry. She served as admissions committee chairman for Germantown Friends School. Surviving are her husband, a son, a daughter, her mother and a brother.

○ **Morrison C. Stayer,** Carlisle; Jefferson Medical College, 1906; age 84; died September 24, 1969. He had retired in 1959 from the Pennsylvania Department of Health after a career in military and public medicine which covered fifty years. He served in both world wars and joined the state department in 1946, after retiring from active service. His Army career brought him numerous decorations, including the Croix de Guerre. A son survives.

Raymond W. Biggar, Philadelphia; Jefferson Medical College, 1940; age 54; died July 4, 1969. He is survived by a daughter.

PENNSYLVANIA MEDICINE

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Booklets: *A Full Measure of Life*, free from the U. S. Department of Health, Education, and Welfare, National Institutes of Health, Bethesda, Maryland . . . *Cigarettes, America's No. 1 Public Health Problem*, 25¢ from Public Affairs Committee, 381 Park Ave. South, New York, N. Y. 10016 . . . *The Story of Health*, listing of more than 200 health-related motion pictures and publications, free from Public Relations Division, Pharmaceutical Manufacturers Association, 1155 Fifteenth St., N. W., Washington, D. C. 20005 . . . *Factors Related to Response in a Health Examination Survey*, 50¢ from Superintendant of Documents, Government Printing Office, Washington, D. C. 20402 . . . *Family Use of Health Services*, 60¢ from Superintendant of Documents, U. S. Government Printing Office, Washington, D. C., 20402 . . . *Pharmacy Manpower*, 40¢ from Superintendant of Documents, U. S. Government Printing Office, Washington, D. C., 20402 . . . *Manual of Blood Component Preparation*, $5.00 (hard cover) from American Association of Blood Banks, 30 N. Michigan Ave., Chicago, Ill. 60602 . . . *The Catalogue of HEW Assistance*, $5.50 from Superintendant of Documents, U. S. Government Printing Office, Washington, D. C. 20402 . . . *Health Services for Mothers and Children*, free from U. S. Public Health Service, Washington, D. C. 20201.

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PENNSYLVANIA MEDICINE

meetings

JANUARY

PMS Board of Trustees Meeting, January 7-8, 1970, PMS Headquarters, Lemoyne.

SVRMP Executive Committee, January 29, 1970, PMS Headquarters, Lemoyne.

FEBRUARY

Wills Eye Hospital Twenty-second Annual Clinical Conference, February 5-7, 1970, Bellevue Stratford Hotel, Philadelphia. Contact Robert D. Mulburger, M.D., 1601 Spring Garden St., Philadelphia 19130.

MARCH

New Jersey Society of Anesthesiologists Seminar, March 7, 1970, Cherry Hill Inn, Cherry Hill, N. J. Contact New Jersey Society of Anesthesiologists, 180 E. Twenty-first St., Paterson, N. J. 07513.

Mediclinics Postgraduate Medical Refresher Course, March 9-19, 1970, Galt Ocean Mile Motel, Fort Lauderdale, Fla. Contact Mediclinics, 832 Central Medical Bldg., St. Paul, Minn. 55104.

PENNSYLVANIA MEDICINE classified

PHYSICIANS WANTED

General Practice: Institutional: Desire more regular life with regular hours, vacations, sick leave, time for attendance at meetings, etc.? Consider working on a sixty-bed medical service in a 350-bed psychiatric teaching hospital with a full-time internist, several psychiatrists, part-time surgeons and generalists at the Mental Health Institute, Cherokee, Iowa. Iowa license required. Salary to $24,600 if eligible. Contact J. T. May, M.D., Superintendent.

Emergency Room physicians needed for full-time staffing. Ideal for the new graduate or for the experienced physician wishing to slow down. Write ADMINISTRATOR, Sharon General Hospital, Sharon, Pa.

Beautiful Bedford County needs physicians in private practice. Excellent opportunity. Well-equipped local hospital with open staff expanding to 115 beds with four-bed ICC unit. Resort community with newly acquired light and heavy industry. Hunting, fishing, skiing, boating and three golf courses. Excellent school system. No big-city problems. Two hours from Harrisburg, Pittsburgh, Washington, D. C. Contact M.D. Search Committee, Memorial Hospital of Bedford County, R. D. 1, Everett, Pa. 15537.

Physicians in general medicine wanted—active 200-bed GM&S hospital. Liberal vacation, sick leave, health benefits, and retirement plan. Board certified or qualified preferred. GP with good background in internal medicine considered. U. S. citizenship preferred and license any state required. Equal opportunity employer. Contact Hospital Director, Veterans Administration Hospital, Erie, Pa. 16504.

Physician in General Medicine wanted: Active 200-bed GM&S hospital. Liberal vacation, sick leave, health benefits and retirement plan. Board certified or qualified preferred. GP with good background in internal medicine considered. U. S. citizenship preferred and license any state required. Equal opportunity employer. Contact Hospital

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Director, Veterans Administration Hospital, Altoona, Pa. 16603.

Director of Coronary Care Unit: Are you a board certified or eligible cardiologist, or a board certified or eligible internist with at least one additional year of formal training in cardiology? We are seeking such a man to be chief of our coronary care unit. Currently a three-bed unit completely separated from ICU is in the process of completion and a five-bed unit in our new building addition is scheduled to open in 1972. Duties consist of directing the present unit and actively participating in completion of the new unit. Unit staffed by formally trained CC nurses. Address all inquiries to Administrator, Charleroi-Monessen Hospital, North Charleroi, Pa. 15022—Telephone (412) 483-5561.

Mental Hospital Director—mid-state location combines best of urban and rural. Salary to $27,697. Active treatment program in 690-bed facility. Community programs developing. Minimum six years in psychiatry with four in administrative or supervisory capacity. Write: Harry H. Negley, Jr., M.D., Chairman, Board of Trustees, Hollidaysburg State Hospital, P. O. Box 319, Hollidaysburg, Pa. 16648

Internists, general practitioners, pediatricians wanted for group medical practice in inner city Philadelphia. Prefer those interested in social change. Competitive salary, fringe benefits, and faculty appointment to medical school for qualified physicians. Please contact Mr. Harold A. Burks, 3701 N. Broad St., Suite 812, Philadelphia, 19140.

General practitioner urgently needed. Ideal country practice; clear air, good water, hunting, fishing and golfing. Six miles to accredited open hospital. Will aid financially if necessary. Contact Salisbury Lions Club, Salisbury, Pa. 15558.

Associate radiologist for 250-bed hospital near Center City, Philadelphia. Medical college affiliation, immediate opening, top financial arrangements. Early partnership, fringe benefits, excellent future. Write Department 567, PENNSYLVANIA MEDICINE.

Psychiatrist: Pennsylvania Hospital, Community Mental Health/Mental Retardation Center operates a sixty-bed unit at Philadelphia State Hospital, Byberry. The unit was established as a therapeutic community, and requires the services of a psychiatrist to serve as part-time consultant. This is a challenging opportunity for one who would venture

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PENNSYLVANIA MEDICINE

in my opinion

Dodo Bird or Lizard?

In a recent Associated Press article a science writer made the following statement "In the future the family doctor will be almost as extinct as a dodo."

The article was based on an interview with Dwight L. Wilbur, M.D., past president of the American Medical Association, who immediately wrote to the science writer and pointed out that he had not made such a statement and, furthermore, did not think the statement was true. As a matter of fact Dr. Wilbur pointed out that "the family physician plays an important role in the medical care of the American people." He added that "he is the most important physician in rendering primary medical care and that no one is in a better position to practice the art and science of medicine than the family physician."

The family physician of today is radically different from his physician ancestors of just one generation ago and no doubt his sons and grandsons will be just as different from him, not only in training but in methods of practice and application. Each of us in his own practice can see great changes in medical care over a period of ten, twenty or thirty years. A given medical illness or surgical problem is approached differently now than even a few years ago because of facility of transportation, availability of consultation services in our own hospitals or nearby areas, constantly developing new drugs and surgical techniques, and team approaches (e.g. community mental health centers, "computer medicine," group practice, and education as preventive medicine).

The family doctor of some years ago, who was often the only source of medical care in the community, was of necessity forced to deal with all medical problems facing him. The people who got well did so partly because of his kindly and dedicated ministrations, but there were many not so fortunate, such as the child with diphtheria or scarlet fever, the man who was kicked in the head by a horse, or the young person developing severe rheumatic heart disease following rheumatic fever. Today the infant immunization program would prevent diphtheria, the head injury patient would be seen and after emergency care referred to a neurosurgeon either in the same hospital or one in a nearby community, and the rheumatic fever patient would be on long-term antibiotics or, if necessary, could be treated with mitral commissurotomy or as we have seen recently, even heart transplantation.

Thus it is easy to see that the well-trained doctor (general practitioner or family physician) is needed more than ever and is in a far better position today to offer better care to more people than ever before. Better trained doctors are spreading out into smaller and rural communities away from the teaching centers and, along with better hospitals and laboratory facilities, are providing first class primary medical care.

At the seventy-ninth annual meeting of the Association of American Medical Colleges, a British expert in medical education, Lord Alexander R. Todd, Ph.D., stated that far from becoming extinct, the general practitioner is likely to be the cornerstone of medical services in the future."

"In Britain," he said, "we envisage a new form of general practice in the future in which general practitioners will work together in large groups based in fully-equipped health centers with adequate ancillary staff, including nurses, psychiatric social workers, etc."

The key then is adaptability to change, a characteristic which most family doctors demonstrate. Anyone of us who carries on an active role as a general practitioner learns to swing with the punch from day to day.

Speaking of adaptability brings me to the subject of the lizard who had adapted from the pre-civilization days of the dodo bird and dinosaurs. A recent television show produced by the National Geographic Society concerned reptiles and their evolution from dinosaurs. The present-day forms include tiny tree frogs, deadly cobras, tree vipers and ten-foot long komodo dragons of Indonesia. One interesting thing pointed out by scientists is that reptiles can survive large exposures of radioactivity, so that if "civilized man" ever gets to a nuclear holocaust, these reptiles may be all that remains to populate the earth and it would be just like old times.

So the dodo birds have long since departed and the lizards are still here and are hardy survivors. Which shall we be—dodo birds or lizards?

Let us be lizards!

D. Ernest Witt, M.D., Past President
Pennsylvania Academy of General Practice
Reprinted from *The Keystone Physician*

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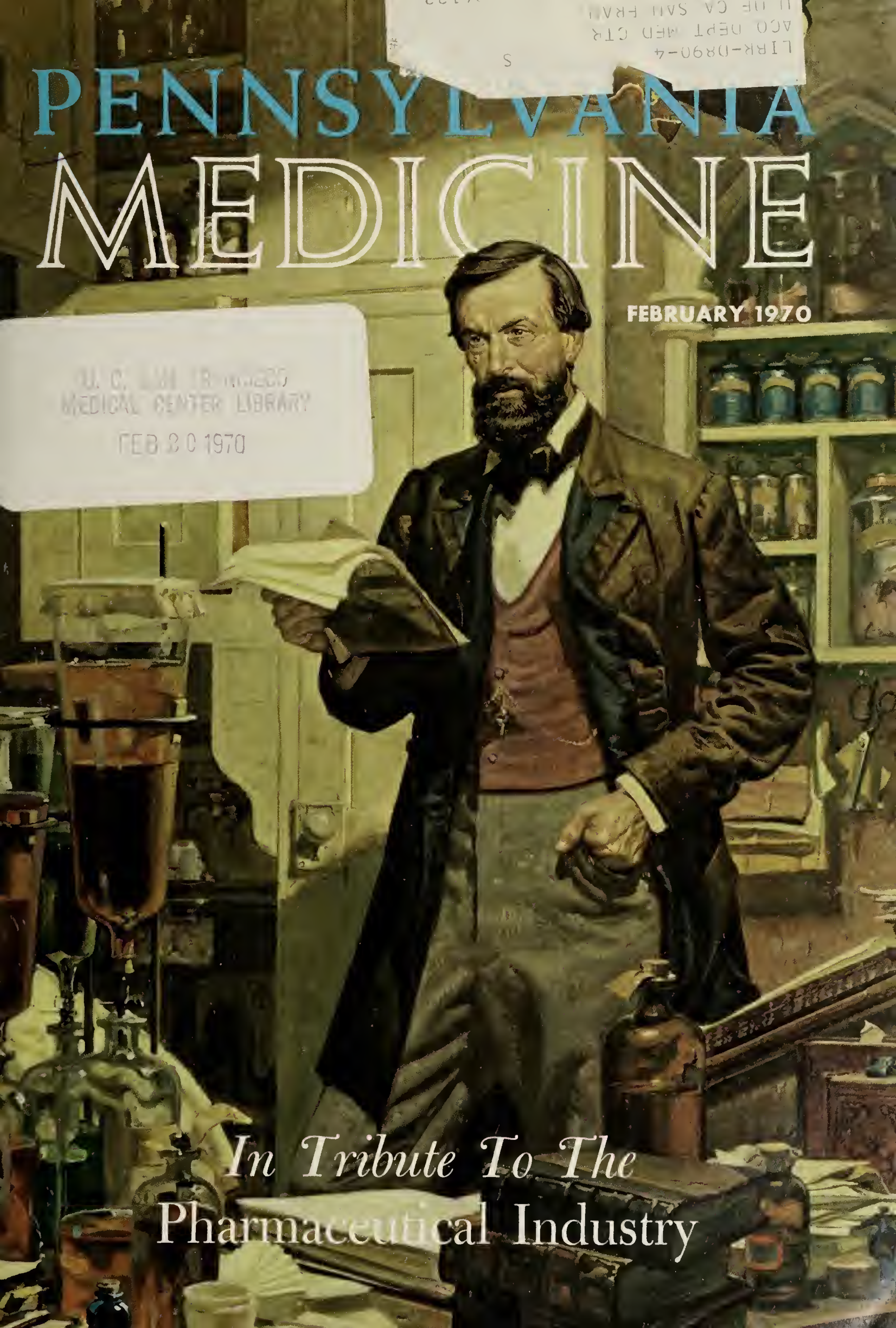

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PENNSYLVANIA
MEDICINE

/medigram

FEBRUARY, 1970

ANTI-HEROIN TOOL OK'D The Pennsylvania Department of Health has been authorized the use of methadone to fight heroin addiction. Already administered through experimental treatment in the Commonwealth, Governor Shafer signed into law last month the bill giving the health secretary power to establish methadone centers in the state.

PMS SEEKS EDUCATION ACCREDITATION In an effort to present courses that offer participants full credit toward the AMA's Board recognizing individual continuing education involvement, the State Society has asked the AMA's Council on Medical Education to survey the continuing education programs of the PMS Council on Education and Science for approval as an accredited educational institution.

DELAWARE COUNTY INDUSTRY HONORED The Vertol Division of the Boeing Company in Delaware County has been selected by the PMS as the winner of the 1969 Occupational Health Award recognizing outstanding efforts in providing occupational medical programs for employees. The company was the nominee of the Delaware County Medical Society.

OFFICERS' CONFERENCE PROGRAM SET The cost and methods of delivery of health care in the decade ahead will be the theme of the 1970 PMS Officers' Conference to be held at the Penn Harris Motor Inn, Lemoyne, April 22 and 23. Each county medical society will be invited to send four persons at State Society expense, but others also may attend.

COUNTY INVOLVEMENT REQUESTED Because vocational-technical schools and community colleges are designed to fulfill the manpower needs of a given area, it is hoped they might be a means of meeting the shortage of health manpower as well. PMS will be asking county medical societies to become involved in planning the health-related curricula and courses at these institutions.

GROUP LIFE INSURANCE APPROVED The PMS Board of Trustees has endorsed a group life insurance program underwritten by Traveler's Insurance Company for all members of the Pennsylvania Medical Society. The endorsed plan was selected from proposals of eleven different companies. The program provides term insurance protection at extremely competitive rates and waiver of premium and double indemnity clauses are available. Details will be presented by the Council on Medical Service. As an example: a 44-year-year-old physician member may obtain a $50,000 policy at an annual premium of $228.50, with the policies guaranteed renewable to age 70 and non-cancelable.

SCHOLARSHIP AID SUPPORTED

The State Society is asking federal and state agencies responsible for scholarship aid to medical students to maintain the present level of support for at least the next few years and is urging them to recognize the difficulties the disadvantaged have in obtaining financial support. At the same time, the State Society voted to work hand in hand with the Keystone Medical Society in the area of student support. The Keystone group is largely made up of physicians who are black.

COUNCILOR MEETINGS URGED

The trustees and councilors of the Pennsylvania Medical Society have been urged by the PMS Board of Trustees to hold an annual meeting for representatives of the county societies within their respective districts. Members of the State Society staff have been assigned to assist in handling administrative arrangements for the meetings.

SCIENTIFIC SESSION SCHEDULED

The Host Farm Resort Motel at Lancaster again has been selected for the site of the 1970 PMS Scientific Assembly, November 16 through 19.

EUGENIC STERILIZATION SYMPOSIUM

A spring symposium in eugenic sterilization is in the planning stage as a means of gathering data about the topic so that the State Society may develop a position that could lead to legislative action. The PMS Commission on Mental Health is involved in planning the symposium which will be financed with the help of the AMA Council on Mental Health.

FAMILY PLANNING SURVEY DUE

A survey of state physicians to determine their availability for providing family planning services to persons referred to them by state government agencies will be conducted cooperatively by the State Medical Society and the Pennsylvania Department of Health. The survey form, with a cover letter from both organizations explaining its purpose, will take less than a minute to complete and ultimately will be used to select physicians to whom health department personnel will make referrals.

MEDICINE AND RELIGION POSTER OFFERED

The State Society has established March as "Medicine and Religion Month" to focus attention on the complementary roles of the physician and clergyman in the treatment of the whole man. PENNSYLVANIA MEDICINE, in its March issue, will feature a full-color removable poster for display in patient waiting rooms during the month of March. The state journal will also publish an important article on medicine and religion in that same issue.

SPORTS MEDICINE RECEIVES SUPPORT

1970 finds PMS supporting two important sports medicine events--a research approach to be taken by Pennsylvania State University in a June symposium and a training session for sports physicians, coaches and trainers at the Germantown Academy, Ft. Washington, in August.

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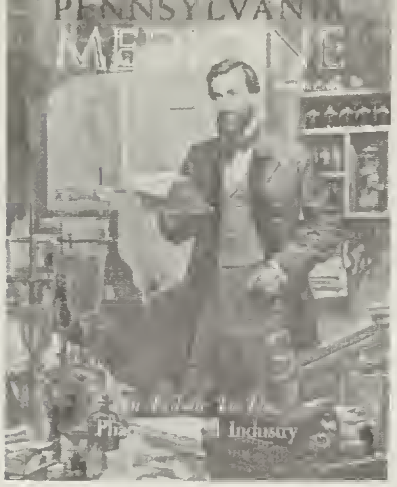

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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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RESPIRATORY DISEASE: The use of Iodo-Niacin is indicated whenever an expectorant action is desired to increase the flow of bronchial secretion and thin out tenacious mucus as seen in bronchial asthma, and other chronic pulmonary disease. Iodo-Niacin has also proven of value in sinusitis, bronchitis, bronchiectasis, and other chronic and acute respiratory diseases where the expectorant action of iodide is desired.

RATIONALE: The signs and symptoms of pellagra, bromism, and iodism are similar in many respects and have been postulated by some investigators to be caused by the same mechanism: poisoning of coenzymes I and II. These enzymes are vital to cellular oxidative metabolism and are essential in the Krebs' cycle. Nicotinic acid is specific for the therapy of pellagra. Its use in the prevention or treatment of iodism follows from the above postulation: a source of replenishment of the pyridine ring structure in coenzymes I and II.

DOSAGE: THE ORAL DOSE FOR ADULTS IS TWO TABLETS AFTER MEALS TAKEN WITH A GLASS OF WATER. For children over eight years, one tablet after meals with water. The dosage should be individualized according to the needs of the patient on long-term therapy.

SIDE EFFECTS: Serious adverse side effects from the use of Iodo-Niacin are rare. Mild symptoms of iodism such as metallic taste, skin rash, mucous membrane ulceration, salivary gland swelling, and gastric distress have occurred occasionally. These generally subside promptly when the drug is discontinued. Pulmonary tuberculosis is considered a contraindication to the use of iodides by some authorities, and the drug should be used with caution in such cases. Rare cases of goiter with hypothyroidism have been reported in adults who had taken iodides over a prolonged period of time, and in newborn infants whose mothers had taken iodides for prolonged periods. The signs and symptoms regressed spontaneously after iodides were discontinued.

CAUTION: The causal relationship and exact mechanism of action of iodides of this phenomenon are unknown. Appropriate precautions should be followed in pregnancy and in individuals receiving Iodo-Niacin for prolonged periods.

SUPPLIED: Bottles of 100, 500 and 1,000 Slosol coated pink tablets.

REFERENCES: 1. Modell, W., ed., *Drugs of Choice*, 1968-1969, pg. 435. 2. Carryer, H. M., and Henderson, L. L.: *Postgrad. Med., 41*:612, 1967. 3. Wells. Jr., R. E.: *M. Clin. North America, 44*:5, 1960. 4. Richerson, H. B.: *Hospital Formulary Management*, (Sept.) 1967. 5. Stern, F. H:. *Psychosomatics*, Aug. 15, 1968. 6. Abrahamson, Jr., I. A., *et al.*: *E.E.N.T. Dig.*, July, 1968.

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newsfronts

Ellsworth R. Browneller, M.D., *(left in left-hand photo) takes the oath of office as the Commonwealth's secretary of health. Governor Raymond P. Shafer, center, administered the oath. Joseph J. Kelley, Jr., right, secretary of the Commonwealth, participated in the ceremony.*

Dr. Browneller (foreground in right-hand photo) informed the PMS Board of Trustees and Councilors at their January meeting of important state health matters he will undertake in his new office and appealed for Society support.

Dr. Browneller Fills the Bill

Danville M.D. Heads State Health Dept.

Ellsworth R. Browneller, M.D., on leave from his post as administrative director of the Geisinger Medical Center, Danville, has become Pennsylvania's new secretary of health.

He succeeds Thomas W. Georges, Jr., who had been acting secretary of health and secretary of public welfare until his resignation at the end of 1969. Stanley A. Miller, Harrisburg, was appointed secretary of public welfare.

Dr. Browneller, who comes to his new post well-prepared both by previous experience and education, made one of his first official appearances before the PMS Board of Trustees at its first meeting of the new year on January 7, just two days after Governor Raymond P. Shafer administered the oath of office to him.

A native of Chambersburg, Dr. Browneller has demonstrated continuing interest in comprehensive and quality health care for many years. He has continuously explored ways to bring about closer working relationships among private physicians, community hospitals, government and private health agencies and the general public. The new accent placed on community medicine by state and federal government is not a new concept to Dr. Browneller.

A graduate of Franklin and Marshall College, Lancaster, and Jefferson Medical College, Philadelphia, Dr. Browneller also earned the degree of master of science in administrative medicine from Columbia University in 1956, following a four-year stint in the Navy during which time he served as a flight surgeon.

He became director of the Jefferson Medical Center Hospital in 1956 and held the post until he assumed his duties at Geisinger in 1962.

Dr. Browneller's professional associations are numerous. He is vice-chairman of the Regional Advisory Group of the Susquehanna Valley Regional Medical Program, member of the Governor's Advisory Council on Comprehensive Health Planning, member of the board of directors of the Hospital Association of Pennsylvania and of the Pennsylvania League for Nursing, a fellow in the American Public Health Association, and a member of the AMA, the American Hospital Association, the Association of American Medical Colleges and the Pennsylvania Medical Society. He and his wife and five daughters make their home in Danville.

U. Pa. To Study Sex Education In Medicine

The Commonwealth Fund today announced three grants totaling $640,000 for programs bearing upon the medical problems of human sexuality and upon family planning and population control.

One grant for $240,000 is to the University of Pennsylvania's Center for the Study of Sex Education in Medicine, which was founded at the school of medicine last year with fund support.

The grant to Penn's Center for the Study of Sex Education in Medicine will be used to expand staff to meet a demand for the center's services that is far exceeding the level anticipated when the center was launched - with fund support last year.

The center is already working with faculty representatives of eighty-two of the nation's medical schools to begin to bring sexual problems of medical practice into the mainstream of the physician's training in patient care. It conducts an information service among these teachers to ensure the prompt exchange of significant new knowledge, as well as teaching materials, ideas, and methods. It also provides consulting and evaluation services and, in addition, offers individual faculty training and research opportunities at the Penn medical campus.

The center is headed by Harold I. Lief, M.D., director of the school of medicine's division of family study. As a component of that division, the center contributes to and draws upon large programs of service, research, and teaching in the special fields of marriage counseling and family guidance. Close links have also been established with Penn's departments of psychiatry, obstetrics and gynecology, and pediatrics.

The fund's grant will strengthen the center's administrative organization; its research capacity in sex and related patient care problems; and its educational research in teaching and learning as applied to sex education for physicians. And finally, the grant will permit the center to develop family planning as an integral dimension of patient care in sex and marriage.

Mercer Secretary Visits PMS

Vincent Ricciutti, M.D., *right, new secretary of the Mercer County Medical Society, confers with Mr. Alex Stewart of the staff of the Pennsylvania Medical Society during his recent visit to the Lemoyne headquarters as part of the Society's continuing orientation program for county medical society officials.*

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Orientation For Auxiliary Officials

Top officers of the Woman's Auxiliary to the Pennsylvania Medical Society spent a day in December making an orientation visit at PMS Headquarters.

Mrs. John A. Schneider, auxiliary president, and Mrs. Leroy A. Gehris, president-elect were escorted on their tour by Mrs. Robert D. Oyler, auxiliary executive secretary.

Two Medical Magazines Merge

General Practice, the journal of the American Academy of General Practice, merged last month with *American Family Physician* magazine according to a report from AAGP's executive director.

The new publication will be mailed to 112,750 readers under the title *American Family Physician/GP* with a special insert for AAGP members.

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Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported, in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium and BUN during therapy, particularly in patients with suspected or confirmed renal or hepatic insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—their combined use can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk; thus adverse reactions which have occurred in adults may occur in the fetus or newborn infant. Rarely, thrombocytopenia or pancreatitis has developed in newborn infants whose mothers had received thiazides during pregnancy. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte determinations. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Adjust dose of antihypertensive agents given concomitantly.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, altered carbohydrate metabolism, hyperbilirubinemia, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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&F

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State Physicians Appointed to AMA Posts

The American Medical Association, in accordance with action of the House of Delegates and Board of Trustees, has appointed the following Pennsylvania physicians to councils and committees of the AMA, for a term of one year, with a maximum of ten consecutive terms.

Council on Health Manpower

Eugene P. Pendergrass, M.D.,
Philadelphia (Reappointed)
Ex-Officio (representative of)
Council on Medical Education
William A. Sodeman, M.D., Rosemont
Ex-Officio (representative of)
Committee on Nursing
Charles L. Leedham, M.D., Harrisburg

Council on Legislative Activities

Paul S. Friedman, M.D., Philadelphia
(Appointed)

Council on National Security

Richard A. Kern, M.D., Philadelphia
(Reappointed)

Commission on Emergency Medical Services

National Research Council
John M. Howard, M.D., Philadelphia
(Reappointed Principal)
Francis C. Jackson, M.D., Pittsburgh
(Reappointed Alternate)

Committee on Continuing Medical Education

James Z. Appel, M.D., Lancaster
(Reappointed)

Committee on Medical Aspects of Automotive Safety

Arthur H. Keeney, M.D., Philadelphia
(Reappointed)

Committee on Nursing

Charles L. Leedham, M.D., Harrisburg
—Chairman (Reappointed)

Interspecialty Committee

American Academy of General Practice
Edward J. Kowalewski, M.D., Akron
(Appointed Principal)
American Association of Neurological Surgeons
Frederick Murtagh, Jr., M.D.
Philadelphia (Reappointed Alternate)

Joint Committee on Mental Health in Industry

John MacIver, M.D., Pittsburgh

Liaison Committee to American Bar Association

James Z. Appel, M.D., Lancaster

Senator Addresses Dauphin M.D.s

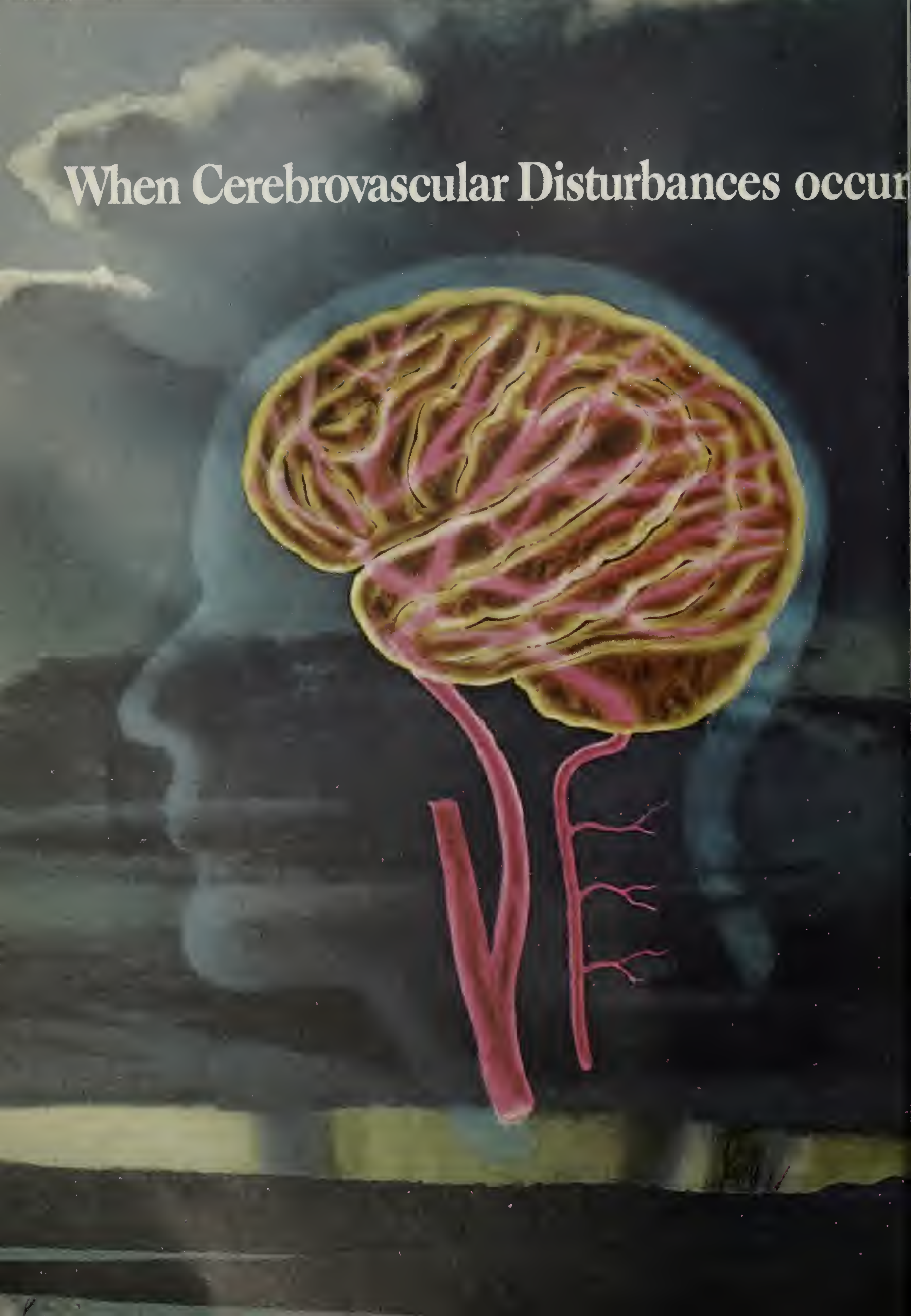
U.S. Senator Richard S. Schweiker, *above, left, was the featured speaker at a recent meeting of the Dauphin County Medical Society. He is shown with R. Edward Steele, M.D., right, president of the society. Guests at the meeting were members of the Cumberland County Medical Society, and wives of the members of the two groups. Senator Schweiker was introduced by William A. Sullivan, M.D., program chairman.*

The Cycle of Civilizations

Beginning with bondage, it moves to spiritual faith,
Then from spiritual faith to courage,
From courage to freedom,
From freedom to abundance,
From abundance to selfishness,
From selfishness to complacency,
From complacency to apathy,
From apathy to fear,
From fear to dependency,
And from dependency back to bondage. *(Author and source unknown)*

Mead Johnson—pharmaceuticals created for your specialized clinical needs

When Cerebrovascular Disturbances occur



...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODĪLAN®

(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

MeadJohnson
LABORATORIES

ıough not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of
‹suprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]
ications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease),
ynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic).
nposition: VASODĪLAN tablets, isoxsuprine hydrochloride 10 mg. **Dosage:** Oral—10 to 20 mg. (1 or 2 tablets) t.i.d. or q.i.d. **Contraindications**
l Cautions: There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial
eding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10
or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete
ails available in product brochure from Mead Johnson Laboratories **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut,
R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G E., and Johnson, P C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson,
., and LePere, D M · Angiology *11*:190-192 (June) 1960 (4) Dhrymiotis, A D, and Whittier, J R.: Current Therapeutic Research *4*:124-128 (April)
2 (5) Whittier, J R.: Angiology *15*:82-87 (Feb) 1964

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Rubella Immunization Launched for 14 State Areas

Seventy-five Harrisburg area doctors donated at least one-half a day in the rubella immunization program held December 8 through 19 in the eight school districts of Central Dauphin, Susquehanna, Steelton Highspire, Harrisburg, East Pennsboro, Camp Hill, West Shore and Mechanicsburg. At least 16,000 children in ninety public, parochial and private schools, those in the kindergarten through fourth grade group, were immunized. The group represented about seventy per cent of those eligible to receive the vaccine. Robert E. Longenecker, coordinator of the Community Vaccination Program, reported that 17,167 children actually returned permission slips, which is 95.6 per cent of those eligible. He said it might be presumed that the majority of those have been vaccinated, so that it is safe to assume that within the greater Harrisburg area adequate protection exists against an outbreak of German Measles.

The Harrisburg area was the first of fourteen target areas throughout the Commonwealth in which the Pennsylvania Department of Health will conduct such a program. The cities of Pittsburgh and Philadelphia are conducting programs independent of the state program.

Clara G. Wertime, M.D., of the Department of Health, directed the program, and supervised the activities of the volunteer physicians, as well as the school nurses, and other volunteers. Assistance was provided by the Tri-County Crippled Children Association, United Cerebral Palsy of Pennsylvania and the National Foundation of the March of Dimes. Holy Spirit Hospital donated space for storing the vaccine.

Initially the larger metropolitan areas have been selected for the program, but as more vaccine becomes available, cities in the population group of 20,000 to 40,000 will be approached to hold similar programs under the auspices of the county or local medical agencies.

VA Honors Pharmaceutical Industry

Donald E. Johnson, Administrator of Veterans Affairs, has announced the presentation of a Meritorious Public Service Award to the Pharmaceutical Industry on January 21 in recognition of its cooperation and voluntary compliance with the equal employment opportunity program.

The Veterans Administration has overall Federal Contract Compliance responsibility for the pharmaceutical industry.

In a letter to C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, the principal trade association of the industry, Mr. Johnson said:

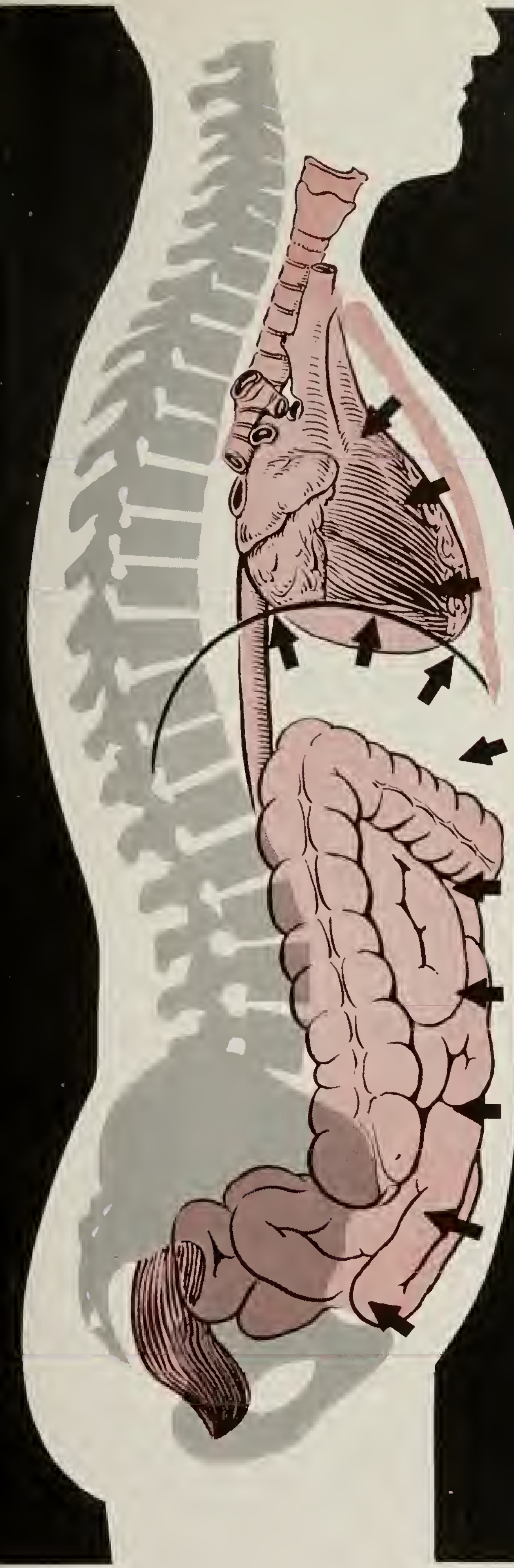
"I have been impressed by the cooperation of the industry and the progress it has achieved in providing improved equal employment opportunities during the period January 1968–July 1969. My Contract Compliance Officer has also provided me with examples of how the industry has moved beyond minimum compliance in employment practices into making cultural, educational, recreational and other contributions to the total social environment that demonstrate industry involvement with the larger social objectives of equal opportunity for all citizens."

This is the first award VA has made for an industry's contributions to equal opportunity employment and to an improved social environment for all citizens and to his knowledge the first such award to an entire industry by any government agency.

RESOLUTION

"BE IT RESOLVED, that we as a medical profession insist on the humane treatment as set forth by the Geneva Convention of those men who are prisoners of war in Southeast Asia, and urge that the medical profession throughout the world support this resolution."

The above resolution was adopted by the Board of Trustees and Councilors of the Pennsylvania Medical Society at their January 7, 1970, meeting.



DOXIDAN®

...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*

Doxidan is a gentle laxative designed to free your patient from the hemodynamic consequences of straining at stool. With a fecal softening agent to keep the stool soft and easy to evacuate, and with just enough peristaltic stimulation to urge the sluggish bowel, Doxidan reduces the hemodynamic "bind" of constipation.

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Children 6 to 12—one capsule daily. Give at bedtime for two or three days or until bowel movements are normal.

Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

est, C. H. and Taylor, N. B.: *The Physiolog-*
cal Basis of Medical Practice, 7th edition,
illiams and Wilkins, Baltimore, 1961, p. 480.

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Div. American Hoechst Corp.
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C-124

Pa. Drug Firm Releases Heart Model to Schools

Merck Sharp & Dohme's life-size plastic heart models, nearly 200,000 of which have been distributed to the nation's physicians, are now available as teaching aids for the nation's schools, the firm announced.

In a new public relations program, the firm is providing its familiar full-color, break-open replica of the human heart to educators at a price that covers out-of-pocket costs—$4.40 each.

The plastic model was originally developed as a patient-instructional aid for physicians. Subsequent models of the kidney, spinal cord, knee joint, eye and hand have been provided to physicians. Over the years, many teachers got in touch with the firm after seeing the heart models in their doctors' offices. These teachers, and a large number of doctors, asked if the models could be made available directly to educators. The current program is the result of this interest.

"Through use of these heart models in the classroom, the student's interest in science and medicine can be stimulated," said John J. Horan, executive vice president and general manager of MSD. "In addition, the student will be helped to a better understanding of the heart that will enable him to take better care of his own body.

"We believe as well that a better informed public will continue to seek treatment through professional channels, such as his family physician and his pharmacist," Horan added.

To enhance the value of the heart model as a teaching device, the firm has published a special "teachers manual" to accompany every model ordered.

More information on the availability of the models can be obtained by writing: Heart Model, Public Relations, Merck Sharp & Dohme, West Point, Pa. 19486

Dr. Hale Guest at PMS Board

Edward H. Hale, M.D., *standing, president of the Keystone Medical Society, discusses areas of needed cooperation with the Board of Trustees and Councilors of the Pennsylvania Medical Society at its January 7 meeting in Lemoyne. The Keystone Medical Society is the state arm of the seventy-four-year old National Medical Association, a nationwide organization consisting primarily, but not exclusively, of negro physicians. The president of the Keystone Medical Society has an invitation to attend all PMS board meetings to encourage a continuing dialogue between the two state medical groups.*

Pediatricians Urge New Council

Sports Medicine in Schools

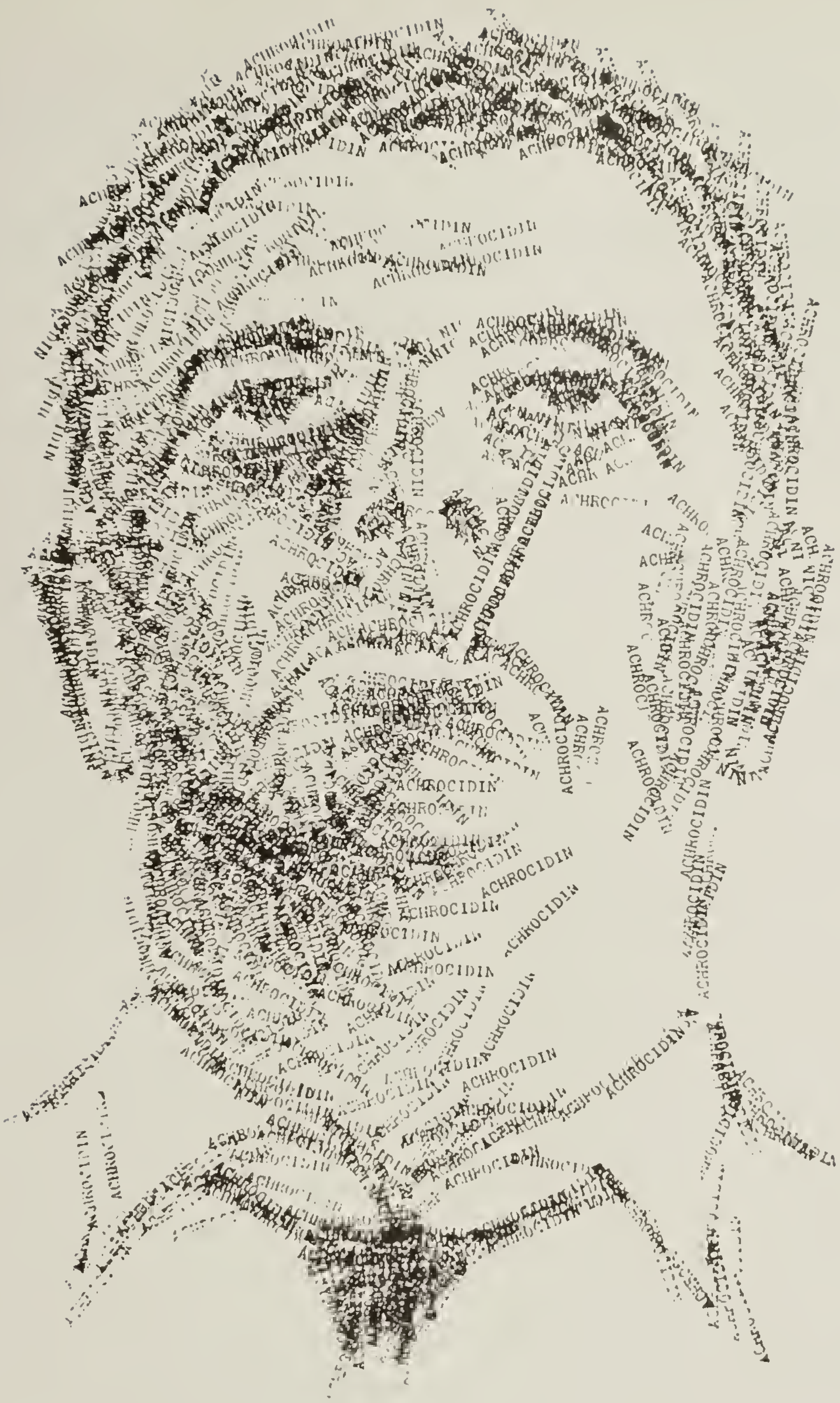
Establishment of local sports medicine councils located within school board areas has been proposed by the American Academy of Pediatrics.

In a statement appearing as a supplement to the *AAP Newsletter*, the Academy's Committee on Youth urges all national organizations interested in the health status of children and youth participating in sports and recreational activities, "to approve, actively support, and encourage all its membership to develop these councils in every community throughout the United States."

Membership in the sports medicine council would consist of the school administrator, athletic coach, trainer, physician, and athlete.

Sports medicine councils would have these primary functions:

- To evaluate all local resources (material and individual) available for the provision of the highest quality of health care for the athlete.
- To review and implement established policies of national organizations which are recognized as leaders in health concerns for the athletic participant.
- To inspect sports equipment periodically, and call any deficiencies and substandard equipment to the attention of the appropriate authorities. These authorities shall then be empowered to cancel any athletic event until the necessary recommendations have been activated.
- To review instances where injury or illness related to sports participation has occurred, and make recommendations to eliminate recurrences.
- To provide for the dissemination of all pertinent information related to sports medicine to the public, local medical societies, school administrators, coaches, trainers, athletes, and others.
- To promote workshops, conferences, and other educational endeavors for the preparation and continuing instruction of those who are responsible for the health and safety of young athletes.



Achrocidin® Tablets and Syrup

Tetracycline HCl—Antihistamine—Analgesic Compound

Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen Citrate 25 mg.

ACHROCIDIN Tetracycline HCl—Antihistamine—Analgesic Compound Tablets and Syrup are recommended for the treatment of tetracycline-sensitive bacterial infection which may complicate vasomotor rhinitis, sinusitis and other allergic diseases of the upper respiratory tract, and for the concomitant symptomatic relief of headache and nasal congestion. For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN Tetracycline equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any omponent.
Warning: In renal impairment, since liver tox-city is possible, lower doses are indicated; dur-ng prolonged therapy consider serum level determinations. Photodynamic reaction to sun-ight may occur in hypersensitive persons. Photosensitive individuals should avoid expo-ure; discontinue treatment if skin discomfort occurs.
Precautions: Drowsiness, anorexia, slight gas-ric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.
Upon adverse reaction, stop medication and treat appropriately.

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newsfronts

SSA Advises on Disability Benefit Procedures

Doctors are in the best position to advise patients when to apply for disability benefits under social security, according to John F. Ludwig, district manager, Social Security Administration, Harrisburg.

In determining eligibility for disability benefits for their patients, doctors should consider answering three key questions:

1. Is the patient's condition so severe as to prevent substantial gainful activity?
2. Is the disabling condition likely to persist for at least a year or to result in death?
3. Is the person insured under social security or the dependent or survivor of an insured person?

A recent study by the Bureau of Disability Insurance showed that one out of seven allowed claimants had lost some money because they waited too long to apply for their benefits. Since benefits are payable twelve months retroactively and there is a six-month waiting period, it means that the claimants who experience a financial loss waited for more than nineteen months from the month they were disabled to make their application.

Mr. Ludwig suggested that if the patient's physician can answer "yes" to the first two questions, he should consider referring the patient to the local social security office.

In considering such a referral, according to Mr. Ludwig, the doctor is advised to weigh the effects such a recommendation could have on the patient's attitude. Would the receipt of disability benefits relieve some of the patient's financial worries or would it tell him that his condition is worse than he thought it was? Working through another member of the patient's family could make the task easier.

Because it could be a breech of the confidential doctor-patient relationship, the physician should not take the initiative to contact the social security office himself, says Mr. Ludwig. However, the opposite extreme of totally ignoring the patient's social and economic needs could be equally unsatisfactory. The best time to refer a patient is within the first four months.

The Social Security offices in Pennsylvania will assist applicants in the preparation of their claims and in getting the medical evidence to support their claims. The physician's help in completing the medical forms received from the Social Security office or the patient will be most helpful in processing the claim and is frequently the key document in the decision to grant benefits.

The decision as to the fact of disability is made by a division of the State's Bureau of Vocational Rehabilitation under a contract with the Social Security Administration. In some cases where the medical information is not convincing, the patient's physician may be asked for additional facts. In cases where recent medical information is not available, the Social Security Administration may authorize a current examination, usually by a specialist.

It should be pointed out that not all claims are paid. Occasionally a person is not eligible for disability benefits because he hasn't worked under social security long enough and sometimes the disabling condition is determined not severe enough to meet the standards. However, even if the physician or the patient may be in doubt about eligibility, it is most important that a claim be filed and that the Social Security Administration be given an opportunity to review the case.

Honoring Health Reporting

Donaldson Entries To Be Judged

Judging for the Walter F. Donaldson Awards, Pennsylvania Medical Society's highest recognition for outstanding reporting in the field of medicine and health, will begin next month, according to the PMS Council on Public Service.

The annual presentations are made in separate monetary awards and plaques for newspapers, radio and television in large and small exposure markets.

The nominee's entry must reflect outstanding reporting in the field of medicine and health within the award year with no limit to the number of articles or broadcast entries that may be submitted. The nominee must be an employee of a mass communications medium (newspaper, trade publication, magazine, radio or television) whose circulation or broadcast area is predominantly within Pennsylvania.

All entries in the 1970 Donaldson Awards competition must be received by the Pennsylvania Medical Society no later than March 1, 1970.

World Medical Certificate Offered

The World Medical Association, organized to protect the professional interests of the medical profession and the cause of world peace, is offering a handsome certificate to each physician who applies for membership.

Upon receipt of the membership application, accompanied with a check for $10.00 in annual dues, the association will send the certificate, bearing the member's name and the signature of the WMA secretary general. Members also receive a membership card, a subscription to *World Medical Journal* and copies of *News Items*.

Applications should be addressed to World Medical Association, Inc., (Dept. 535), 10 Columbus Circle, New York, N.Y. 10019.

AMA Priority Objectives:

Solutions to Nation's Major Health Problems

"We plant trees today so that others may have shade tomorrow." Burtis E. Montgomery, M.D., Harrisburg, Ill., chairman of the AMA Board of Trustees, recently quoted this Chinese proverb to illustrate that the accomplishments of today's physicians and medical societies should include the solution of eight of the most pressing health problems now confronting the nation.

As identified by the American Medical Association, they are:

The acute shortage of health manpower—the demand for health care has created an imbalance in the supply-demand equation of health professionals and other personnel. Increasing affluence, longer life, greater appreciation of good health care, and such government programs as Medicare and Medicaid have greatly increased the demand. Consequently, the AMA, in cooperation with the Association of American Medical Colleges, is urging all medical schools to expand their enrollments and offers its assistance in establishing new schools. Success of this approach to date is evidenced by twenty-four new medical schools created since World War II, raising to 101 the total of schools now accepting students. Others are in the planning or construction stage, and most existing schools have increased their enrollment.

The AMA Council on Medical Education is cooperating with attempts of medical schools to reduce the length of medical training and is reviewing the time required by various specialty boards for certification of specialists.

The AMA Committee on Education for Related Health Professions and the AMA Council on Health Manpower are also stimulating a variety of programs to develop new physicians' assistants, new health care roles for nurses, and innovative steps to increase total productivity. The association has adopted essentials of accredited educational courses and accredits programs for thirteen different technologies. In addition, it endorses increased federal appropriations for both the schools and individual students.

Rising health care costs—the AMA is working closely with the American Hospital Association and hospital medical staffs to review every item of hospital costs in an effort to remove those items which should be supported by other means. Physicians are also being encouraged to eliminate hospital care or reduce it whenever possible and to use less expensive extended care facilities and home health care services. The AMA is now preparing a public education program to illustrate how unrealistic demands for health care inflate costs.

Financing health care—the AMA supports a national health insurance plan based on tax credits and certificates that would enable all Americans to purchase comprehensive health insurance coverage. Its proposal would establish a sliding scale of tax credits depending on the individual's tax liability, and the credits would be applied to health insurance provided by private carriers.

Mental health—the AMA proposed the program that was enacted by Congress to establish a network of nationwide community mental health centers. The program involves close cooperation with the mental health administration and other experts to discover more efficient methods of treatment and rehabilitation, allowing a quicker return to productive work by the patients.

Pollution—the AMA Council on Environmental and Public Health has held several national conferences on the problem of pollution of the air, waterways and the land, and it is working closely with governmental and private agencies to ameliorate this growing health hazard.

Alcoholism and drug addiction—the widespread use of alcohol has been accompanied by millions of medically identifiable alcoholics. They suffer a type of drug addiction which requires medical therapy and which is the cause of 50 per cent of all fatal accidents and innumerable criminal acts. Consequently, the AMA Committee on Alcoholism and Drug Dependence continues to conduct a major educational program in this area, directed at both adults and youths.

Health care of slum residents—the AMA Committee on Health Care of the Poor, recognizing that the problem of health care in the slum is basically a problem of the slum itself, is conducting a series of studies and conferences with civic and social leaders, and it is preparing specific recommendations to improve both the quality and delivery of health care in these areas.

Malnutrition—poor nutrition is more far-reaching than most people suspect. It covers not only the underprivileged, but also the middle-income group and relates strongly to education at all levels of society. The AMA has adopted an aggressive program to fight hunger and malnutrition; local societies are being encouraged to meet with community dietitians, dentists and other health specialists in resource seminars and to participate in area health surveys.

In addition, the AMA will publicize guidelines for the evaluation of malnutrition, examine the science of nutrition as part of formal medical education, seek development of a central coordinating agency for nutrition at a high level in the executive branch of government, urge development of urban and rural programs to provide health services with a nutritional emphasis, and evaluate current nutritional education in schools.

Dr. Montgomery, speaking in behalf of the AMA Board of Trustees, has asked each medical society to help implement these programs at the state and local level. "Everything physicians do today to help find solutions to these eight major health problems will affect, in large or small part, what physicians of tomorrow will be able to accomplish," he said.

Blue Shield Prevailing Fee Program: A Detailed Report

Pennsylvania Blue Shield's new Prevailing Fee Program provides a comprehensive list of benefits with payments for doctors' services based on the criteria of usual, customary or reasonable charges.

The new program is now being offered for the first time to the general public. Contacts are being made with present groups of subscribers by representatives of Blue Shield's agent plans on a scheduled basis. It will be offered to non-group subscribers in the next few months.

Approved by the Pennsylvania Insurance Department on October 27, 1969, the new program enables Blue Shield to offer to all Pennsylvanians a new concept in prepaid health care financing which has been available previously only to groups on a master contract basis.

Three new agreements are being offered under the new prevailing fee program—each with identical benefits. The new paid-in-full agreements are:

Blue Shield 100 provides payment of the usual, customary or reasonable charges for covered services as payment in full except for two specified deductibles.

Blue Shield 80-20 pays eighty per cent of the usual, customary or reasonable charge for covered services except for two specified deductibles. The subscriber must pay the remaining twenty per cent. The subscriber is notified by Blue Shield of the amount he must pay within sixty days to the doctor.

Blue Shield 80 provides paid-in-full benefits for persons of low income, with Blue Shield paying 80 per cent, except for the two deductibles, and the participating doctor absorbing the remaining 20 per cent of the prevailing fee. This agreement is available *only* to persons of low income—$2,500 annually for individuals, and $4,500 annually for families. Low income status must be certified by the applicant at the time of enrollment and at each annual anniversary of the effective date.

Six services not covered in the present Blue Shield medical-surgical agreement—but available as additional coverage at additional cost—are included in the new program. They are: anesthesia, diagnostic X-rays, radioisotopic diagnostic tests, cardiographic examinations, basal metabolism tests and electroencephalograms.

Four benefits not previously available to small groups or non-group subscribers are included in the new program. They are: emergency services when performed in connection with accidental injury within seventy-two hours after the accident, pathology examinations, physiatry in the hospital, and shock therapy.

Extension of five benefits are included in the new program, as follows: medical services in the hospital, increased from 70 to 120 days per admission; normal pre- and post-natal care for obstetrical delivery; certain oral surgery performed in the dentist's office; increased number of consultations; and radiation treatment for all conditions.

Other services which will be paid for in full under the new agreement include: surgery performed in or out of the hospital, including normal post-operative care; obstetrical delivery in or out of the hospital; medical services when not a hospital inpatient for the employed applicant only when he is totally disabled for gainful employment, up to a maximum of twenty-one such visits in any period of twelve consecutive months.

Only two benefits in the new Prevailing Fee Program require deductible amounts to be paid by the subscriber to the doctor: a $25 annual deductible for out-of-hospital medical care home and office visits), and a $10 deductible for pathological examinations in any fourteen-day period.

Other features of the program include the following:

Concurrent care is covered in cases of treatment by a doctor of medicine or of osteopathy who is not in charge, but whose particular skills are required for the treatment of complicated conditions.

Diagnostic X-ray and radioisotope examinations are covered when performed and billed for by a doctor of medicine or of osteopathy, and, in emergency and emergency traumatic cases only, diagnostic X-ray examinations when performed and billed for by a doctor of dental surgery or a doctor of podiatry.

Cardiographic examinations, basal metabolism tests and electroencephalograms when performed and billed for by a doctor of medicine or of osteopathy.

Physiatry in the hospital is covered when performed and billed for by a doctor of medicine or of osteopathy.

The usual limitations and exclusions contained in all Blue Shield agreements are included in the new Prevailing Fee Program.

Oral surgical services *not covered* by the new program include care, treatment, filling, removal or replacement of teeth or structures directly supporting teeth; and including but not limited to the following: apicoectomy, root canal treatments, soft tissue impactions, gingivectomy and alveolectomy.

The Prevailing Fee Program is essentially a method whereby Blue Shield will pay a participating doctor the *usual, customary* or *reasonable* fee for a covered service performed for a subscriber who, regardless of his income, shall receive no additional charge from the doctor. The determination of the amount paid toward a doctor's fee is made on the basis of the following:

Usual is the fee ordinarily charged by a doctor for a given service.

Customary is the fee which conforms with the range of usual fees ordinarily charged by doctors of similar training and experience in a given geographic area. The application of this criterion requires further definition of range and geographic area.

In definining the acceptable range, Blue Shield has used the ninetieth percentile concept which requires that the upper limit of the range must include the usual charges of *at least* ninety per cent of the doctors in the area. While this means that the usual charges of from 90 to 100 per cent of doctors in an area will be acceptable, in practice Blue Shield has found that for most procedures the charges of 95 to 97 per cent of the doctors in any area are within the customary range. It is anticipated that computation of ranges for all areas will be made at intervals not to exceed one year.

Definition of geographical areas was made by using the so-called hospital service areas, which reflect such factors of homogeneity as population, distribution of medical services, transportation, trade patterns and natural geographic boundaries.

Reasonable is the fee varying from the individual doctor's usual charge, or from the customary range of usual charges in an area, because of unusual clinical circumstances applying in a particular case. This criterion permits individual consideration to be given in cases in which the circumstances have been truly unusual.

Subscription rates have been established for five geographic areas of the state. The areas are centered around Allentown, Harrisburg, Philadelphia, Pittsburgh and Wilkes-Barre. The cost of the new agreements, therefore, varies from one area to another.

The Blue Shield 100 agreement costs about twice that of the medical-surgical agreement for the Plan B fee schedule in each area. This is because of the expanded benefit structure as well as the prevailing fee method of payment.

The Blue Shield professional relations department has scheduled a series of meetings in cities throughout Pennsylvania to familiarize doctors and their office assistants with the new program. Professional relations representatives will conduct the meetings and answer questions. The sessions will be held at the following locations in March and April:

Western Pennsylvania

Pittsburgh—Webster Hall Hotel—April 7, 8 and 9, 1970.

Central Pennsylvania

Williamsport—Sheraton Motor Inn —March 31, 1970.
Wilkes-Barre, Scranton—Treadway Inn Wilkes-Barre—April 2, 1970.
Allentown—Walps Restaurant—April 3, 1970.
Reading—Reading Motor Inn—April 15, 1970.
York—Sword and Shield Restaurant—April 16, 1970.
Harrisburg—Schindler's Restaurant, Camp Hill—April 17, 1970.

Eastern Pennsylvania

Warrington—Warrington Inn—March 11, 1970.
Downingtown—Downingtown Motor Inn—March 12, 1970.
Philadelphia—Adelphia Hotel—March 18, 19, 1970.

Morning, afternoon and evening meetings will be conducted at each location, on each day. Physicians may expect to receive invitation with more details from Blue Shield for attendance at the meetings in their areas. It will not be necessary to make advance reservations for attendance.

The prevailing fee method of payment is not new to Pennsylvania doctors. Blue Shield has had a prevailing fee program limited to master contract groups since late in 1965.

The prevailing fee idea began in Pennsylvania in 1963 when Blue Shield and the Pennsylvania Medical Society formed a joint committee to develop a new fee schedule agreement with higher income limits.

After eighteen months of study, the joint committee recommended not a fee schedule program, but a new concept designed to provide for payment of doctors' usual, customary or reasonable charges without additional charge to the patient—regardless of the patient's income.

In 1965, both the board of directors of Blue Shield and the board of trustees of the Pennsylvania Medical Society approved a program involving the prevailing fee concept on a pilot study basis. With the Pennsylvania insurance commissioner's approval, a pilot project was begun in Pottstown in August, 1965.

The next year, the insurance department approved Blue Shield's request to make the prevailing fee plan available to other groups on a master contract basis. It became an instant success with many groups.

Today, there are more than 1.2 million subscribers enrolled in nearly 400 groups who are covered under the prevailing fee concept.

Matthew K. Gale, president of Pennsylvania Blue Shield, summed up the importance of the new prevailing fee program by saying: "It is the keystone on which we are building our future. If we are to provide additional coverage and give better service to a growing number of Pennsylvanians in the future, it will be through the prevailing fee approach.

"Because the new program offers to our subscribers the broadest scope of benefits in Blue Shield history and a more equitable method of payment to doctors, it is obvious to us that the prevailing fee concept is the way to the future in prepayment health care financing."

New Book Documents Facts on Chiropractic

"At Your Own Risk: The Case Against Chiropractic" is the title of the book, authored by Ralph Lee Smith, published last fall by Trident Press.

It is of particular value to the medical profession in that the debunking of chiropractic as a "science" is a factual, fully documented presentation of the history, philosophy and present-day practices of a profession that has confused the public by its false aura of science and its achievement of state licensure.

The author, an accomplished lay writer highly respected for his objectivity, reveals chilling facts: that a number of practicing chiropractors received their degrees by mail order; that apart from their chiropractic training, many chiropractors have only a high school education, and that no medical degree (M.D.) is necessary or even recommended as a prerequisite to engage in the practice of chiropractic.

The chairman of the AMA Committee on Quackery, Joseph A. Sabatier, Jr., M.D., in his review of the book, said: "This volume should be read by every physician. Also, any person who has an interest or commitment in the health care afforded his fellow man will be better equipped by virtue of the exposure of this unscientific cult as a significant health hazard. The book should be required reading for every person in the education field concerned with career counseling. All trainees in the health care field including every technical and professional branch and level of instruction should profit by study of the volume."

PENNSYLVANIA MEDICINE correspondence

On Medicaid and Fraud

The 1969 Pennsylvania Medical Society House of Delegates, in action taken at its October meeting, directed the Society to inquire of the Department of Public Welfare of the Commonwealth of Pennsylvania and the U.S. Department of Health, Education, and Welfare whether or not any physician of this Commonwealth, upon their investigation has in any way defrauded the state government and/or federal government. Following is the full text of an exchange of correspondence regarding the matter between William A. Barrett, M.D., president, PMS, and Thomas W. Georges, Jr., M.D., then secretary of public welfare.

My dear Dr. Georges:

At the meeting of the 1969 House of Delegates of the Pennsylvania Medical Society concern was expressed about the directive given to the United States Internal Revenue Service to investigate all physicians who received more than $25,000 in medicaid or medicare fees.

In the opinion of the House of Delegates, such a statement implies that anyone receiving this sum of money from medicaid or medicare service is guilty of wrongdoing.

The Pennsylvania Medical Society would be interested in learning whether any physician in the Commonwealth, upon investigation by your department, has in any way defrauded the state and/or federal governments. If so, the Pennsylvania Medical Society would appreciate receiving the names of physicians so that a full investigation concerning their conduct might be undertaken and, if necessary, appropriate steps taken to discontinue this wrongful practice.

On the other hand if such investigation shows there is no wrongdoing on the part of member physicians of the Pennsylvania Medical Society in relation to medicare and medicaid programs, we believe that the results of the investigation should be made known to the public.

Sincerely yours,

William A. Barrett, M.D.
President

Dear Dr. Barrett:

This is to acknowledge your letter of November 19, 1969, regarding the question of fraud by professional persons receiving benefits under the Title XIX program.

I think you should be pleased to know that only thirteen physicians have been involved in investigations regarding the invoices submitted to the Department of Public Welfare during the entire history of the Pennsylvania Medicaid program which began in January, 1966. Among other professionals there have been five doctors of osteopathy, eight pharmacists, one dentist, and an optometrist.

With this entire group it should be pointed out that, except in one case, the available evidence was judged by our legal staff to be insufficient for criminal prosecution. In the one exception, the attempt at prosecution ended in acquittal.

Over the three year period restitution payments of $56,000 were made. These occurred under a variety of circumstances. In some instances it was simply a matter of incorrect invoicing or errors. In others, the practitioner agreed to the extent of impropriety.

The small number of professionals involved in the investigative process is even more striking when compared to the fact that the program now receives invoices from 16,000 vendors, approximately half of whom are physicians.

Further, you should be pleased to know that the actual records of our department indicate that a large number of patients are receiving inpatient care from the general hospitals on a free basis by physicians who do not participate in the program for a variety of personal reasons. While we cannot give an approximate figure for free care delivered in offices and in homes, we are aware that large numbers of physicians treat patients on this basis without invoicing.

In regard to physicians who are receiving larger amounts of Title XIX monies it is quite clear that such physicians are practicing in areas where the Title XIX load constitutes the bulk of their patients. On a recent occasion the news media conducted a survey of their own regarding this and reported that in every instance the physician was working long hours, seeing great numbers of patients, and was providing service in return. There are some physicians in the large income category who, in fact, represent groups who perform the same general kind of service, such as obstetrics.

The department does not have control over the directives of the Internal Revenue Service and can only respond to their lawful demand for income reporting. Further, the department has no control over the relationship Health, Education, and Welfare has with the news media. We have raised questions about the release of information and have been advised that exemptions provided in the law and in HEW's public information regulations do not permit the withholding of reports such as the audits of public funds.

In summary, the Department of Public Welfare does not hold to the view that dishonesty is a significant problem in the Title XIX program. The relations we have with all save a few professionals have been very good and we consider the dedication of practitioners outstanding.

We offer your agency the privilege of consulting with the investigative staff of our Title XIX office at any time. However in view of the remarkably low degree of infraction I doubt the merit of publicizing either those cases which have been investigated or those which are currently under study.

Thomas W. Georges, Jr., M.D.
Secretary

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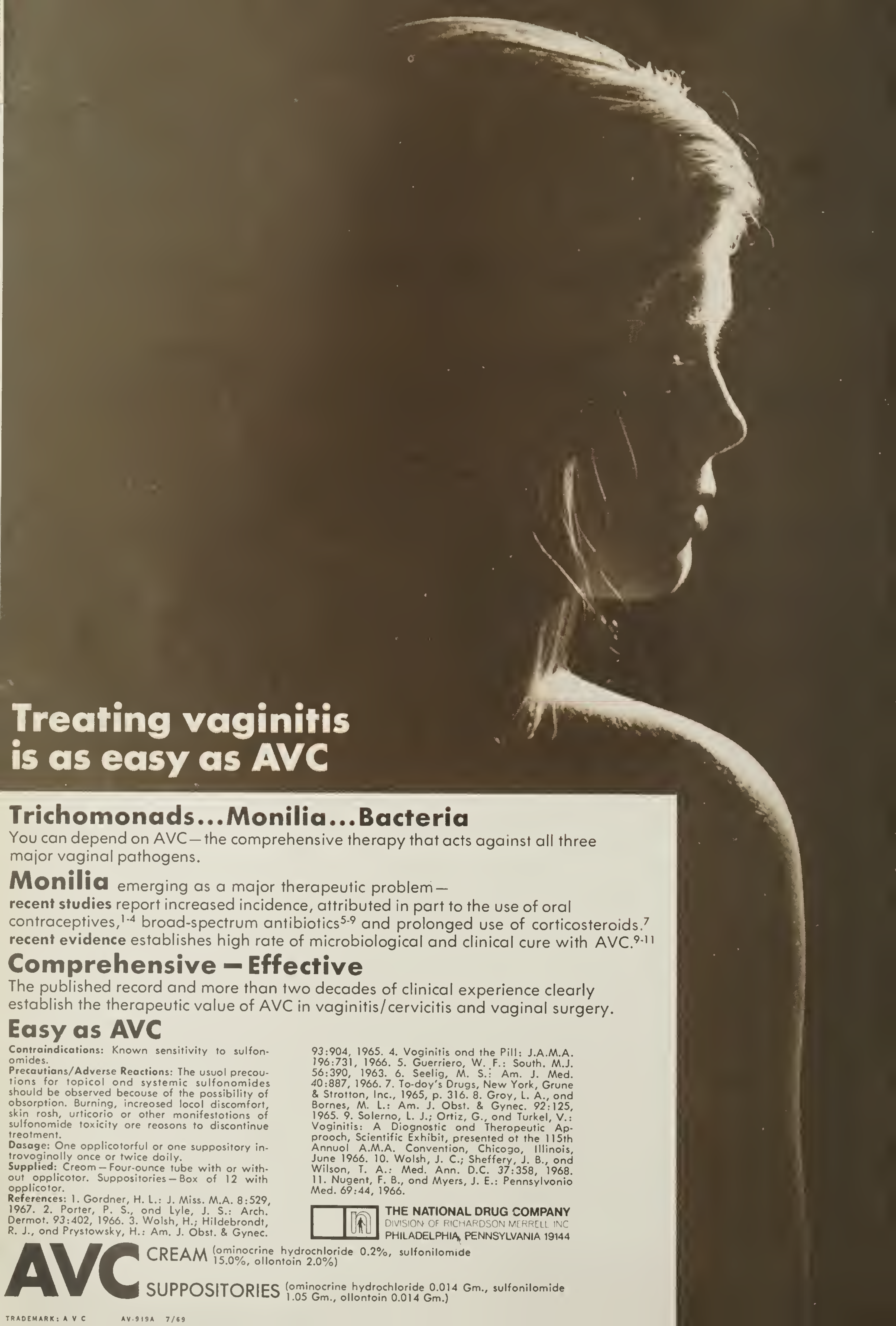

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recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

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Dosage: One applicatorful or one suppository intravaginally once or twice daily.

Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.

References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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DR. KRAMER

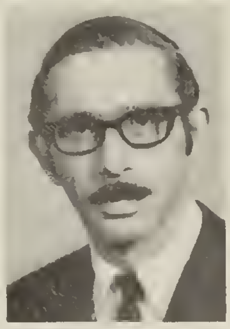
William F. Kellow, M.D., vice-president of Thomas Jefferson University and dean of Jefferson Medical College has announced the establishment of the department of radiation therapy in the medical college. **Simon Kramer, M.D.,** is the new head of this department. Dr. Kramer has been with Jefferson since 1956 as professor of radiology and chief of the division of radiation therapy and nuclear medicine. Dr. Kramer is a graduate (M.B.) of the University of London, Kings College Hospital Medical School. After service in the Royal Army Medical Corps in Italy and the Middle East he returned to England to specialize in radiation therapy at the Middlesex Hospital, London, and later at the Royal Cancer Hospital, London. Dr. Kramer then headed the Radiotherapy Department at St. Boniface Hospital, Winnipeg, Canada and was lecturer in radiotherapy at the University of Manitoba before coming to Jefferson in 1956. A member of the Faculty of Radiologists and several specialist societies, Dr. Kramer is vice-chairman of the Committee of Radiotherapy Studies and is president-elect of the American Society of Therapeutic Radiologists. Dr. Kramer's clinical and research activities have been concerned with the treatment of cancer by radiation therapy and the effects of ionizing radiation on normal and malignant tissues. He is a recognized authority on the management of brain tumors by radiation therapy. He is also evaluating combined chemotherapy and radiation therapy for head and neck cancer and heads a nationwide cooperative study sponsored by the Public Health Service. He is the author of over forty scientific articles and has contributed to four textbooks in his field.

David E. Jenkins, Jr., M.D., an expert in immunological disorders relating to red blood cells, has been appointed associate professor of medicine in The College of Medicine at The Milton S. Hershey Medical Center of The Pennsylvania State University. The appointment of Dr. Jenkins, chief of the hematology unit at Veterans Administration Hospital, Nashville, Tenn., and associate professor of medicine at Vanderbilt University School of Medicine, was announced by **Graham H. Jeffries, M.D.,** professor and chairman of medicine at Hershey. Dr. Jenkins, a native of Niles, Ohio, will assume his post in the College of Medicine at Hershey February 1.

DR. ROBERTS

Pennsylvania Hospital has announced the appointment of **Alfred S. Roberts, Jr., M.D.,** as director of its Community Mental Health/Mental Retardation Center, Philadelphia. Dr. Roberts had been clinical director of the center since its inception in 1965. A graduate of Syracuse University and Hahnemann Medical College, he served his residency at Danville State Hospital and the Veterans Administration Hospital at Perry Point, Md. Dr. Roberts went to Pennsylvania Hospital after seven years at Chester County Mental Health Clinic as clinical director. Prior to that he was a member of the medical staff of Smith, Kline and French Pharmaceutical Company, where he worked in research and development of psychopharmacological drugs. He is a former associate professor of Woman's Medical College, and holds that position now at the University of Pennsylvania.

The appointment of **Arthur D. Nelson, M.D.,** as associate vice-president for program planning and community development at Temple University Health Sciences Center has been announced by Dr. Paul R. Anderson, president of the university.



DR. LEE

Martin L. Lee, M.D., associate in the department of internal medicine at The Geisinger Medical Center, participated last summer in the Volunteer Physicians for Viet Nam program and spent eight weeks attached to a team of U. S. Physicians in a Viet Nam hospital. Prior to his Viet Nam tour of duty Dr. Lee was elected president of the Pennsylvania Allergy Association.

John Hyde, M.D., has been named to the staff of the molecular biology research program at Pennsylvania Hospital, Philadelphia. He comes to the hospital for three years as an N.I.H. (National Institute of Health) special post doctoral fellow. His appointment was announced by **Gilbert N. Ling, M.D.,** director of molecular biology.

DR. BURROWS

Stanley Burrows, M.D., has been appointed to the Editorial Board of *Laboratory Medicine* by the board of directors of the American Society of Clinical Pathologists. Beginning in January 1970, this new monthly periodical will replace both *The Bulletin of Pathology* and the *Technical Bulletin of the Registry of Medical Technologists*, with about 60,000 regular subscribers. Dr. Burrows is chief attending pathologist at the Cooper Hospital in Camden, N. J. and assistant professor of pathology at Jefferson Medical College, Philadelphia.

(*Continued on Page 26*)

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Joseph A. Cipcic, M.D., Pittsburgh, presented a paper, "Sinus Fractures," at a recent meeting of the American Academy of Ophthalmology and Otolaryngology in Chicago, Ill. He also gave a paper on Grafts and Implants in Facial Plastic Surgery in conjunction with **John T. Dickinson, M.D.,** Dr. Cipcic is the new editor of the International Association of Secretaries of Ophthalmological and Otolaryngological Societies.

Alfred M. Bongiovanni, M.D., physician-in-chief at The Children's Hospital of Philadelphia, was guest lecturer at the Children's Orthopedic Hospital of the University of Washington in Seattle last November. While there Dr. Bongiovanni addressed the Seattle Pediatric Society. Dr. Bongiovanni is William H. Bennett professor and chairman of the department of pediatrics at the University of Pennsylvania School of Medicine.

Robert C. Eyerly, M.D., Danville, was elected a delegate director to the board of directors of the American Cancer Society at a meeting of the Society's House of Delegates, recently in New York. Dr. Eyerly, an associate surgeon at the Geisinger Medical Center, Danville, has been an American Cancer Society volunteer for many years, serving with the Montour County Unit and with the Pennsylvania Division. He is currently a board member of the Pennsylvania Division and chairman of the Professional Education Committee.

Katharine R. Sturgis, M.D., chief editor of the American Medical Association's *Archives of Environmental Health* is the 1969 recipient of the Annual Service Award of the Tuberculosis and Respiratory Disease Association of Philadelphia and Montgomery County. The award is presented each year to a person or organization who has contributed most to the advancement of programs in the areas of tuberculosis control, anti-smoking education, air pollution control, and respiratory disease prevention. Dr. Sturgis served as a member of the TB & RD Association Board of Directors from October 1953 to January 1969. She served as president in 1963 and 1964.

Five new radiologists have been appointed to the staff of Lankenau Hospital's Division of Diagnostic Radiology. They are: **Albert Arouh, M.D.,** of Pennsauken, N. J., associate; **Milton Margulies, M.D.,** of Penn Valley, associate; **Hugo F. Rodriguez, M.D.,** of Merion, associate; **John D. Kern, M.D.,** of Ardmore, assistant; and **Arthur J. Press, M.D.,** of Westmont, N. J., clinical assistant.

DR. LOEB

Roland A. Loeb, M.D., Lancaster, was named recipient of the Order of the Sword of Hope, the highest individual honor given to a volunteer by the Pennsylvania Division, American Cancer Society. The award was presented to Dr. Loeb during the Twenty-fifth Anniversary Annual Meeting of the Society's Pennsylvania Division, being held at the Host Farm Motel.

Dr. Loeb is a past president of the society's Pennsylvania Division, and past chairman of the Pennsylvania Cancer Coordinating Committee. He has also served on the National Board of Directors of the American Cancer Society and currently serves on the Executive Committee of the state society. He serves as chairman of the Lancaster American Cancer Society Unit professional education committee, and chairman of the committee on cancer of the Lancaster City and County Medical Society.

Donald E. Stader, M.D., pathologist and director of laboratories, Sacred Heart Hospital, Allentown, has been elected vice-president and president-elect of the Pennsylvania Division, American Cancer Society, at the society's recent annual meeting. Doctor Stader, who has been active with the ACS in Lehigh County for many years, has served as division second vice-president and has been on the division board of directors since 1963. He is a past president and crusade chairman for the Lehigh County Unit.

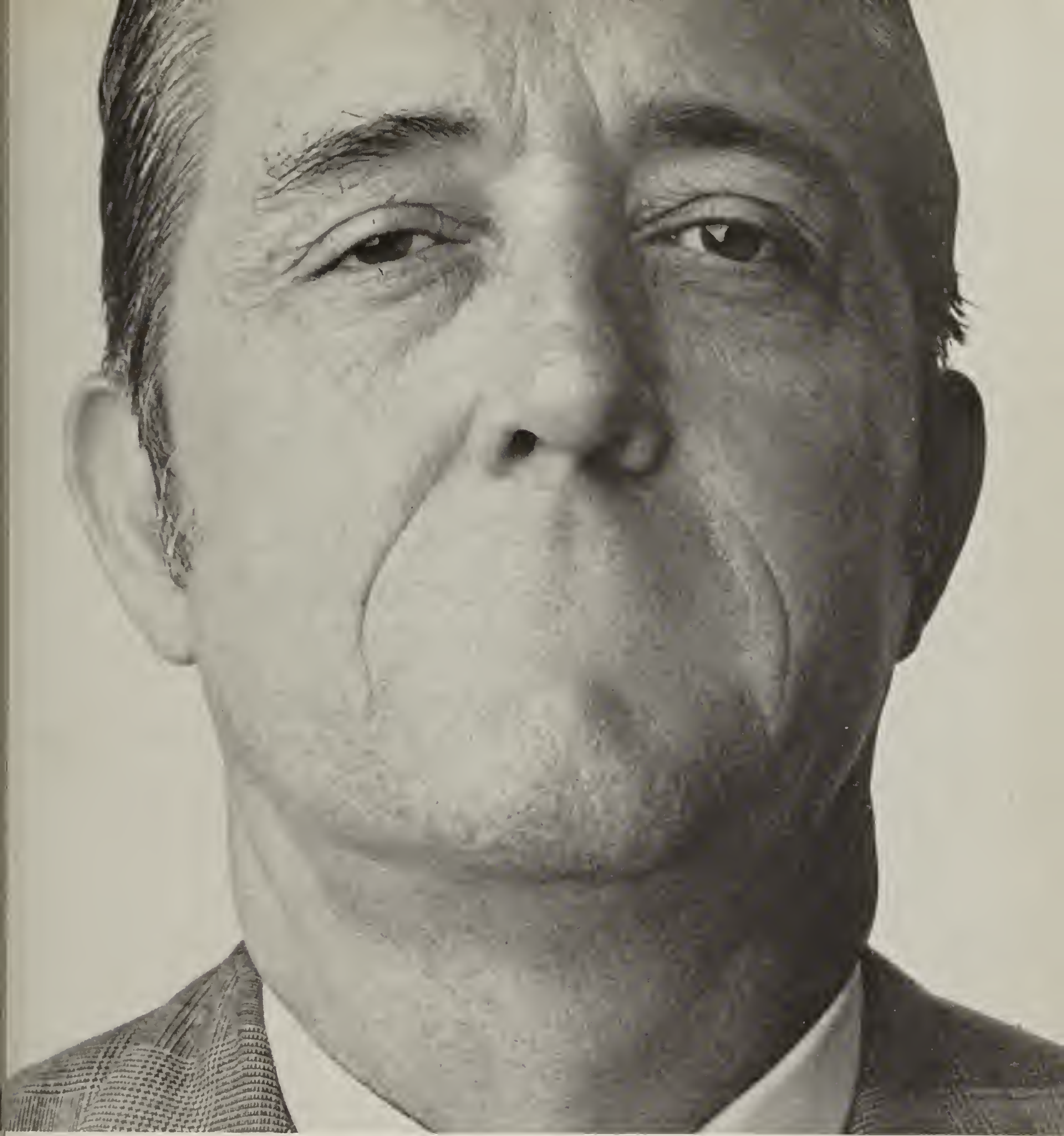
DR. SIGAL

Glen R. Leymaster, M.D., president and dean of the Woman's Medical College of Pennsylvania, has appointed **Bernard Sigel, M.D.,** WMC professor of surgery, as dean of the college. This appointment will enable Dr. Leymaster, who will continue as WMC president, to devote more time to the 119-year old institution's long range planning and development programs. In 1960, Dr. Sigel joined the Woman's Medical College staff as associate in surgery. Two years later, he was promoted to assistant professor of surgery, and in 1964 to associate professor, a post he held until his recent promotion to professor. As part of his WMC commitment, Dr. Sigel also serves on the staff of the Veterans Administration Hospital in Philadelphia.

Frank A. Oski, M.D., director of the blood bank at the Children's Hospital of Philadelphia, lectured at the Downstate Medical Center, Brooklyn, N.Y. recently. He also addressed the College of Physicians and Surgeons at Columbia University in New York. Dr. Oski is associate professor of pediatrics at the University of Pennsylvania School of Medicine.

Drs. David Myers, Robert J. Wolfson, and **Eugene N. Myers,** Philadelphia, returned recently from a five-day post-graduate course given in otologic surgery, and head and neck surgery, in Sao Paulo, Brazil. This was at the request of the University of Santa Casa. The doctors had an opportunity to meet the people of Brazil and found them very interesting and hospitable.

H. Fred Moffitt, M.D., Altoona, and **Robert F. Dickey, M.D.,** Danville, have been named recipients of the National Bronze Medal Award, the highest honor given by the American Cancer Society to a division volunteer. The awards were presented during the annual meeting of the society's Pennsylvania Division.



the silent citizen

tudents riot. Races clash. Crime rows. Traffic snarls. Cities decay.

illions of people say nothing, do othing. The silent citizens. Men ithout mouths.

ther voices are heard. Loud voices, ith passionate convictions, crying r action. Whether their causes are good or bad, right or wrong, the silent citizen looks away.

He's often well informed and he has good ideas of his own, but he saves them for his wife and friends and people he meets at cocktail parties. He never bothers to get them across to his congressman or his newspaper or City Hall or the school board. He never comes out in the open to confront the other point of view.

If he stays silent long enough, the other point of view wins out...unless its supporters suddenly become silent too. Then they go nowhere together, silently waiting for time to run out.

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John P. Eckstrand, M.D., 3811 O'Hara St., Pittsburgh 15213.

CHESTER COUNTY:

J. W. Doeff, M.D., 1220 Powell St., Norristown 19401.
Cyrus L. Mineo, M.D., 286 Friffen St., Phoenixville 19640.
Ajit K. S. Prasad, M.D., Prattsdam Rd., R. D. 2, Coatesville 19320.
Michael S. Riviello, M.D., 3770 E. Fisherville Rd., Downingtown 19335.

CLINTON COUNTY:

John W. Crisanti, M.D., P. O. Box 41, Lock Haven 17745.

CRAWFORD COUNTY:

James R. McLamb, M.D., 249 DeVore Dr., Meadville 16335.

FRANKLIN COUNTY:

Adolfo Maldonado-Barba, M.D., Chambersburg Hospital, Chambersburg 17201.
Pascual N. Patalinghug, Jr., M.D., 35 E. Baltimore St., Greencastle 17225.
Paul F. Rosenstein, M.D., 5 Roadside Ave., Waynesboro 17268.

LANCASTER COUNTY:

D. Rohrer Eshleman, M.D., 60 Main St., Salunga 17538.
John W. Miller, M.D., 1403 Wynnewood Dr., Lancaster 17601.
William R. A. Boben, Jr., M.D., 310 N. West End Ave., Lancaster 17603.
Charles L. Deardorff, M.D., 822 Marietta Ave., Lancaster 17603.
Lewis Dosik, M.D., 89 Bradford Dr. E., Leola 17540.
Manuel Iglesias, M.D., 418 N. George St., Millersville 17551.
Charles Heisterkamp III, M.D., 721 N. Duke St., Lancaster 17602.
Lowell D. Mann, M.D., 306 S. Market St., Elizabethtown 17022.
William W. Young, M.D., 20 Leaf Park, Lancaster 17603.
Nikitas J. Zervanos, M.D., Lancaster General Hospital, Lancaster 17602.

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James F. Cochran, M.D., Twenty-second and Fairview Aves., Easton 18042.
Marvin Z. Kurlan, M.D., 701 E. Third St., Bethlehem 18016.
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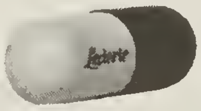

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PENNSYLVANIA MEDICINE

capitol report

In the Commonwealth

Testimony of Dr. Harris on Senate Bill 254

I am John H. Harris, Jr., M.D., chairman of the Pennsylvania Medical Society's Council on Governmental Relations, and appear before you today as the spokesman for the society. I have been authorized to state our views and recommendations as they relate to Senate Bill 254, Printer's No. 267, on behalf of the physicians of the Commonwealth. I am a radiologist in private practice in Carlisle, and, because of my specialty, I am very much concerned with the matters under consideration here today.

The Pennsylvania Medical Society is very much opposed to the passage of this bill for more reasons than are contained in our statement, but, since we recognize that we must confine ourselves to the legislation, we will not go into these larger reasons, unless it is your wish that we do so.

The history of the Blue Shield movement has been one which medicine has followed closely. As a matter of fact, the Pennsylvania Medical Society was the prime mover behind the passage of the legislation that formed Blue Shield in 1939. Since its early beginnings, the physicians of the Commonwealth, through the Blue Shield program, have attempted to provide a mechanism whereby individuals could insure themselves against the medical cost of being ill. Through the years, Blue Shield and the member-physicians have made changes in the original concept very cautiously to the point that we have only several rate increases in the basic Blue Shield coverage since its inception. So, a major reason for opposition to the measure, in this day of rising costs, is our belief that the additional financial burden on Blue Shield from admission of this non-medical service may be out of proportion to the benefits to be accrued by patients who desire coverage for this service. It is our earnest desire that vital medical services be added to the program prior to any inclusion of nonmedical services.

It should be made clear that the services offered by Blue Shield are medical services, and I think the chiropractors themselves are first to admit that they do not practice any form of medicine, and, so, for this reason alone, they should not be included in a medical service organization. The medical society has embarked, with Blue Shield, on quality and utilization control of services rendered by member-physicians and to the subscribers, therefore we would find it quite impossible to guarantee any type of quality control or standards for this group.

Our society remembers an appeal made to the Blue Shield organization prior to 1955 by the Pennsylvania Dental Society requesting a wider coverage of dental services, and, when it was thoroughly investigated, found to be financially impractical for Blue Shield to undertake such a program. The dentists came to the Legislature and obtained legislation to set up a non-profit dental service corporation of their own. Their efforts resulted in the passage of Act No. 238 of 1955. Through the years, the dentists, to their great credit, have built this organization into a functioning and workable organization, and have, according to our information, enrolled many groups who wish their complete dental care covered. We can't help wondering if the chiropractic organizations haven't given some thought to this technique.

In vetoing a similar bill earlier this year, the governor of New Jersey said in his veto message, "It is quite obvious that this legislation is controversial in the extreme. It projects, on the one hand, the argument that its enactment would fully recognize the right of the patient to recover for all or any types of services or treatment, whether within the appropriate scientific range of the practice of chiropractic, or not, and, on the other hand, points up the obvious deficiency of the rather vague description of that practice in the statute which does not seem to limit the range of such practice, except for the surgical, drug administration and certification limitation.

"In weighing the two sets of arguments presented for and against this legislation, and, in view of the vague definition of the practice of chiropractic, and the consequent basis of a consumer to rely upon the unlimited use of chiropractic for the cure of human disease or injury, logic alone might dictate that, absent a serious substantive challenge to the theory of chiropractic, this bill should be approved. Such a challenge has been raised, however, in the form of a recent report submitted to the Congress by the Department of Health, Education, and Welfare. That report was transmitted to the Congress pursuant to Section 141 of the United States Public Law 90-248, which requires the secretary of health, education, and welfare to report to the Congress with respect to the advisability of including the services of chiropractors within the supplementary medical insurance program—medicare—under the Social Security Act."

Madam Chairman: In view of the time limitations, we cannot go into those portions of the so-called "Cohen Report," and so we would ask that a copy of this report be made a part of the record of this hearing.

More recently, the Department of Health, Education and Welfare received a report, under date of November 12, 1969, entitled "Recommendations of the Task Force on "Medicaid and Related Programs," chaired by Mr. Walter J. McAnerny, which also recommends the elimination of chiropractic and naturopathic services from those programs for reasons which we have stated and reasons which are stated in the "Cohen Report." So, Madam Chairman, we would make further request that this report also be made a part of the record of this meeting.

Again, I thank you most sincerely for the opportunity to present our thoughts. It has been difficult through the years to get the Legislature's attention on these issues of such vital interest to good medical care, and so we are doubly grateful to you and your committee.

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Fertility and Sterility, January 1970
Official Journal of the
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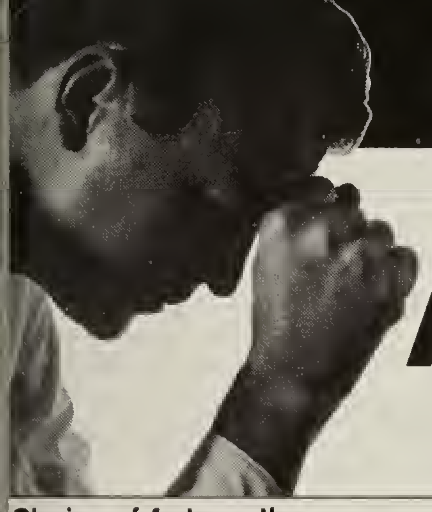

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References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12 69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound West Med 5:67, 1964 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence Gen Prac 25 6, 1962 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone J Clin Endocr 19 936, 1959 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79 863, 1958 6. **Osol, A., and Farrar, G E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

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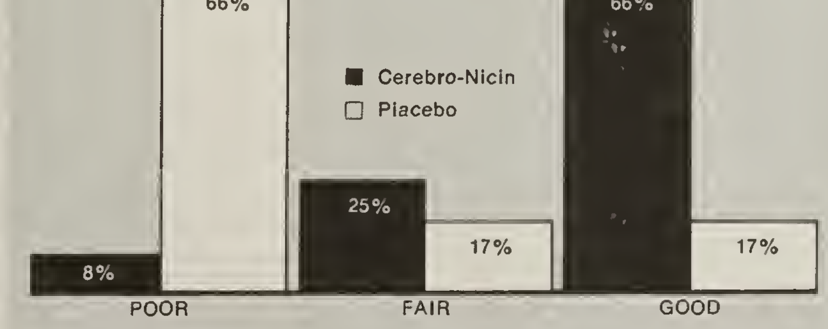

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PENNSYLVANIA MEDICINE

editorials

Materia Medica Nova

Therapeutic nihilists are scarcer among the medical practitioners of our times than the proverbial atheists in foxholes. The well known snide remarks of Oliver Wendell Holmes about the benefits to the genus homo and the harm to the genus pisces if the whole materia medica could be sunk into the sea, are no longer applicable. And William Osler's lack of faith in drugs is also outdated. These renowned doctors would now be using their talents to aid us in using our potent drugs as weapons against disease and injury to the best advantage.

The increase in benefits from our modern drugs has been accompanied by the inevitable increase in responsibility. One medical brain can hold but little of the wisdom and knowledge needed to be a good drug therapist in our times. But as in all branches of medical practice, many health professionals have appeared as help bringers. They are as varied as they are numerous. This issue of Pennsylvania Medicine salutes them. The salute can only be inadequate because the subject is so large and the actors so numerous and impressive. But we can, at least, print a selection of items to indicate the extent of the debt owed by the medical profession to the pharmacologist and the pharmacist as well as to the pharmaceutical manufacturer and the host of scientists of all descriptions who work with them.

The pharmacist in his community drug store, the pharmacist in the community hospital, the pharmacological scientists in our medical colleges and schools of pharmacy, the entrepreneurs, managers, scientists, educators and publicists are all so important to the care of our patients that their absence from the medical scene is unthinkable.

But, to give us an idea of our debt to them, let us indulge in the fantasy of imagining a system within which we must take care of our patients without their help. Let us suppose that we must build up a system of drug therapy "from scratch" with all its personnel, hardware, software and organization. The concept is appalling but informative.

One thing more: Wouldn't it be thrilling if we could survey with Holmes and Osler what we have today at our disposal to care for our patients?

CBL

A Self-Appraisal Test in Prescription Writing

The volume of effort being expended in the striving to continue the education of us practitioners is indeed formidable. One need only to look at the list of available courses listed in Pennsylvania Medicine to learn how seriously we are taking our continuing education. It is my opinion, however, that this effort is dwarfed by the solitary and private studies of individual practitioners.

We have just learned of a superior opportunity for such practitioner-students to refurbish and renew their skills in an area which is most difficult to study—prescription writing. We have been reading a pamphlet which was designed for use by medical students at the University of Pittsburgh, by Paul L. McLain, M.D., Professor of Pharmacology, in collaboration with Dr. Sarah C. Kalser.

The slim booklet is a very admirable piece of work and is ideally suited for use by the doctor who needs to brush up the fundamental skills needed in prescription writing at the same time as he tests himself to determine his competence. The actual programmed text used by the students is not now available but the booklet containing the test material can be obtained from

PAUL L. McLAIN, M.D.
Professor of Pharmacology
School of Medicine
University of Pittsburgh
Pittsburgh, Pa. 15213

Although it was not intended for use outside the university, Dr. McLain has told us that he would be happy to furnish copies to interested physicians "until the supply is exhausted, which will not be long at the present rate of distribution."

Having used this text, your editor can recommend it heartily and can urge interested practitioners to take advantage of Dr. McLain's generous offer.

CBL

(Continued on Page 34.)

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Owner Breaks Arm When Yacht Runs Aground

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm acht ck a large rock

tially capsized. The fire departm had to rescue Waters by small b Damage to the yacht is estimate

Hasn't
the skipper
had enough
excitement
for one day?

or the patient who has been
hrough an accident, the worry
nd anxiety following the
ishap may actually heighten
e perception of pain. This is
vhy there's a classic ¼ grain
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o take the nervous "edge" off,
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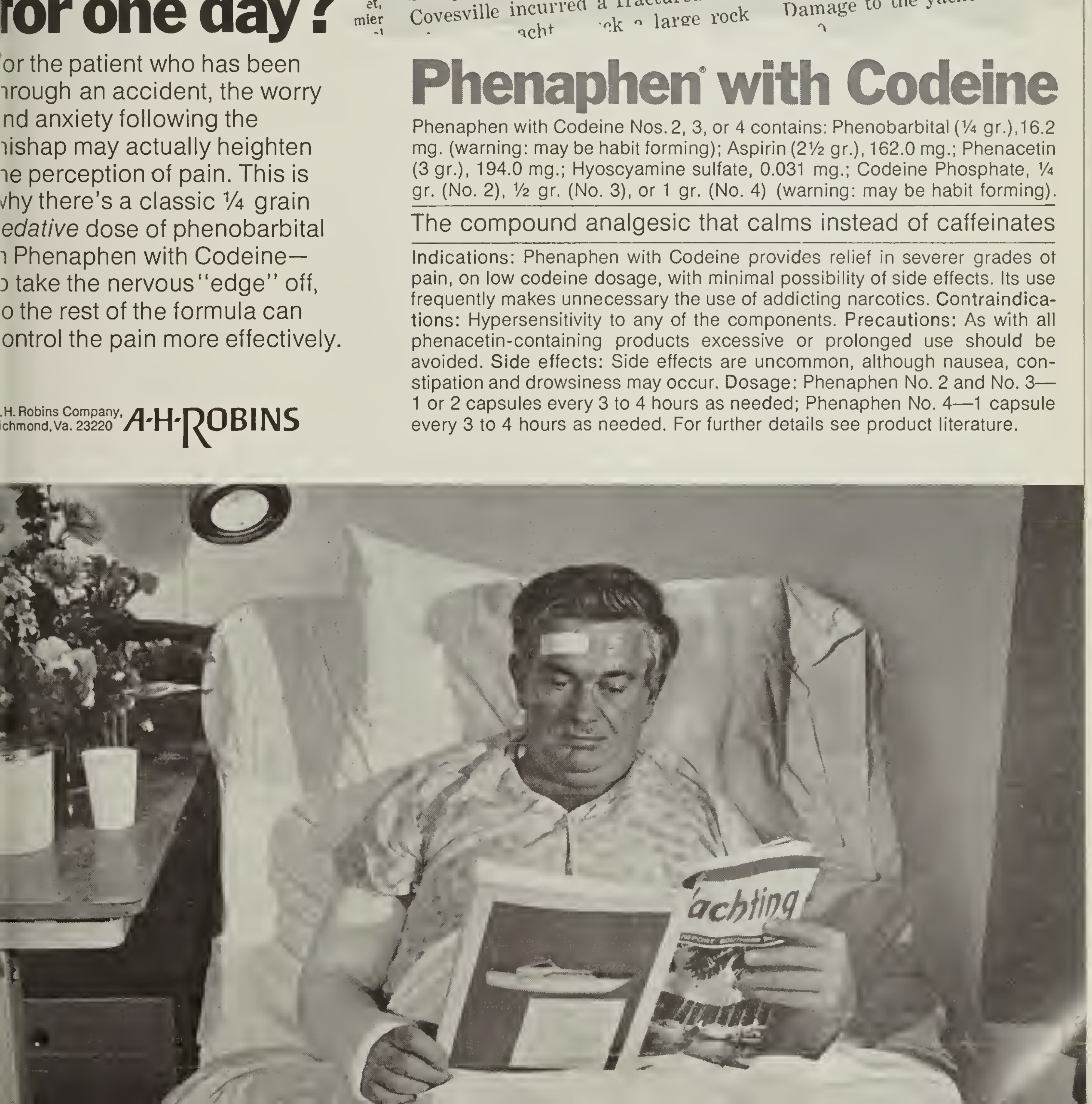
Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.



A Broader AMA

Having been prevented from attending the Denver convention of the AMA, I feel keenly the loss of many advantages. Ideally, *every* physician should attend *every* convention of our association in the interest of his education and to give the gathering its essential general meeting character and to create its ultimate democracy.

A rapid survey of the available scientific, technical and educational advantages would alone make any physician feel he had wasted an ideal opportunity by staying away. There is no comparable opportunity for study and self renewal to be had at any other meeting in the world. Moreover the narrowing effects of a local practice and of confinement to a specialty may best be counteracted by rubbing elbows with fellow doctors at the AMA Convention.

But it was in rapid reading of the *Summary of Actions of the House of Delegates* that I found a small cause for encouragement. In fact, it seemed to me that one who had not been at the scene had a better opportunity to survey one whole aspect of the convention than could be had by being in the midst of the activities, in reading Dr. Howard's report. It is an encouraging exercise and I can recommend to any absentee physician that he survey all activities in our several publications. If it does not give a chance to see the political and socio-economic activity of the association as a *whole*, one can at least view it *in extenso.*

What is particularly encouraging is the fact that our essential asset, the AMA, is not static but is now altering its posture to meet its obligations. Too often we have thought of it as monolithic, ponderous, resistant to change—and with some justice. There is now no doubt that it is capable of change and in the right direction. It is obviously enlarging its scope and in appropriate quarters and proper ways. There is an increase in the number and variety of the problems which we face, and we are moving to confront them. No one who reads the reports could support that old saw about a closed group looking out for its own social and economic interests.

We cannot list many of the activities at the convention. Let us select two illustrations.

The AMA program to aid the poor, "an action program to provide leadership in the nation's efforts to improve health services for the poor" is discussed in *American Medical News*, Dec. 15, 1969. The fact that approval was not unanimous is emphasized in the report. This may serve as a type of the activity I am praising; a change made by our association to serve our fellow citizens. We can change with the times. It also serves to show our ability to hear both sides.

Also an item of discussion and action at the meeting is the interest in broadening the base of membership in the association. Time was when the members seemed to prefer that they make up a sort of private club composed of individuals strikingly alike and comfortable to be with—all private practitioners of medicine. The exaggeration is, of course, recognized; let it serve to emphasize the fact.

President Dorman, in Denver, took a lead in stating that those days of strict membership categories are over. He pointed out that we ought to alter our structure to allow admission of many kinds of doctors "not now eligible for membership in county societies" and thus excluded from our midst. Admission of interns and residents is asked for and the admission of medical students as active members seems desirable to many.

But Dr. Dorman is not acting as a personal innovator in making his suggestions. He is expressing the opinions and convictions of the body of his association. The AMA is you—each individual doctor and it is the individual member whose outlook is broadening and thus enlarging the field of activity of the whole association.

That there is wide variety of opinion and outlook of the members is revealed each week in an ever-fascinating way in the pages of the *American Medical News*, under the heading LETTERS. One wonders, on reading it, if "Association" is justified. From the size and frequency of the differences of opinion it seems more like dissociation.

Let us cherish the difference! It is the cause of our increasing breadth of outlook. The man who holds a view opposed to your own may be a thorn in your side but he is also a great asset. We must have a wide variety of opinion—our success depends on it.

Doctors are educated men and have a unique chance to study their fellow men. To preserve the pre-eminence of medicine in society we need only to have all physicians *in* the organization to obtain the benefit of a wide involvement in our affairs.

Dr. Dorman and the other individuals and groups whose work is to broaden the base of our membership are merely expressing the attitudes of the majority. The power of the presidency of the AMA rests in you and me.

So, for your good and mine and that of all our fellow citizens, including the ones you disapprove, you must make your contribution. We will make a beginning right off. I'll meet you at the county society meeting where we need your opinion and contribution as well as my own in order to mold our organizations into their new efficiency.

CBL

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He was a loving husband and a devoted father. He was a solid citizen.

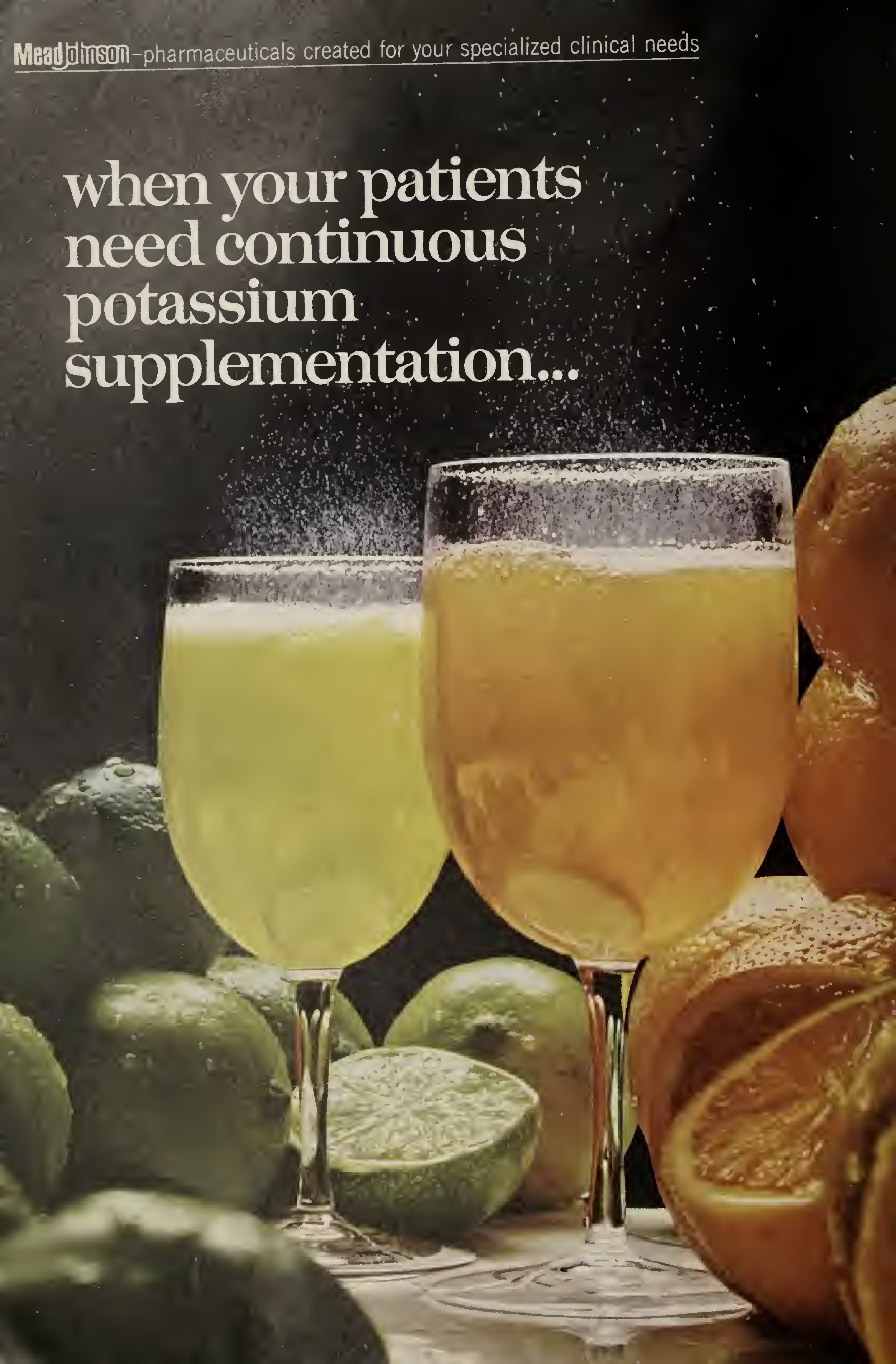
But he was different, calloused, and irrational about the real dangers of air pollution. He didn't give a damn that the air he was breathing was getting filthier every day. And he just didn't believe—just as you won't believe—that the day is not far off when the simple act of breathing could kill you.

Robert Elliott didn't care.

A little concern could have saved him.

How about you? Want to do something about it? Join your community's fight for clean air. Write to the Pennsylvania Medical Society today for details. Write your Congressman. Write to the Mayor. Tell your Committeeman. Talk to your neighbors. SCREAM!

This space sponsored at no cost by the Philadelphia Gas Works and the Pennsylvania Medical Society.



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Number of patients	Mean initial value	Mean final value
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16	3.50	4.40
25	4.52	4.47

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Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
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How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

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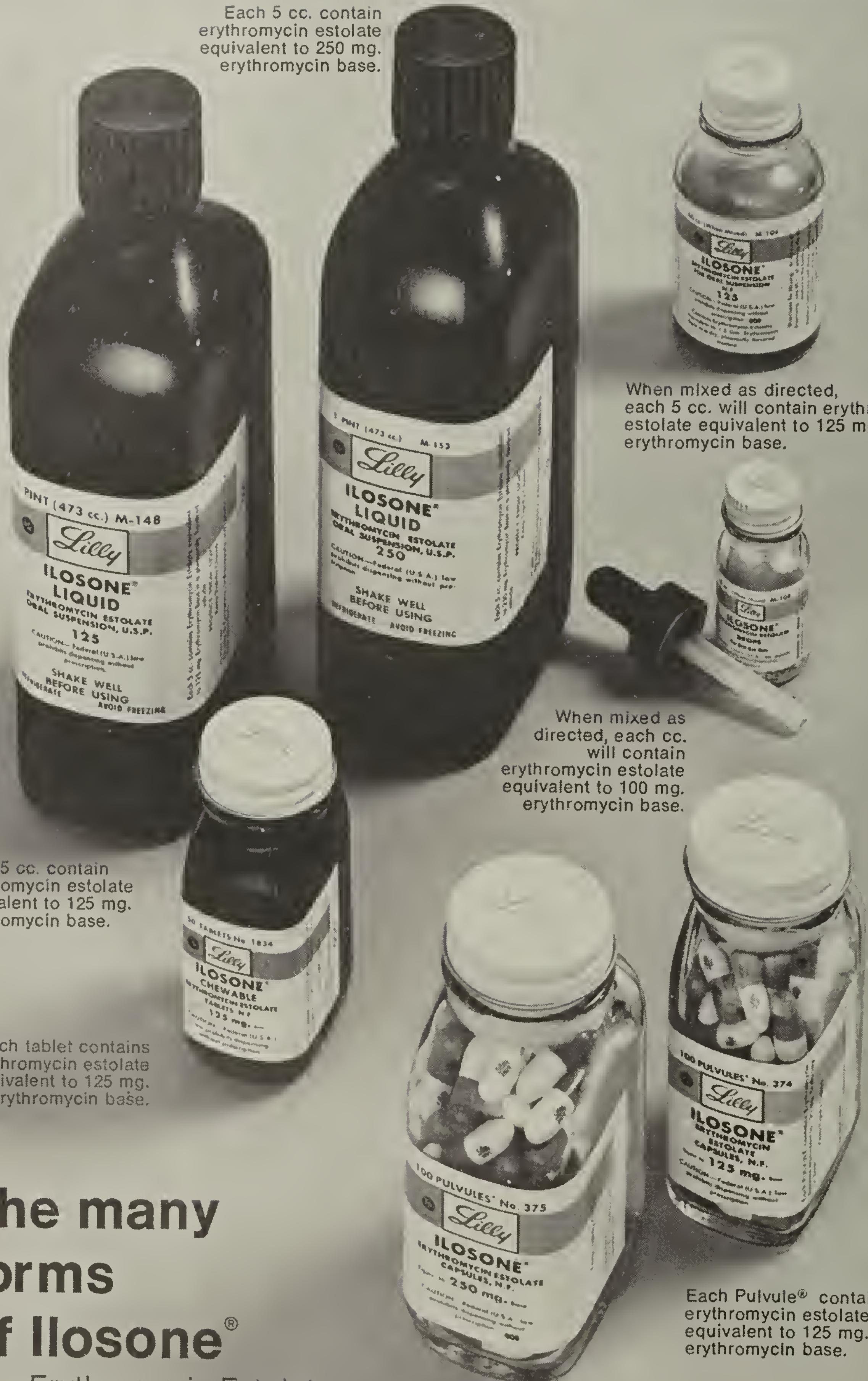

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Each tablet contains
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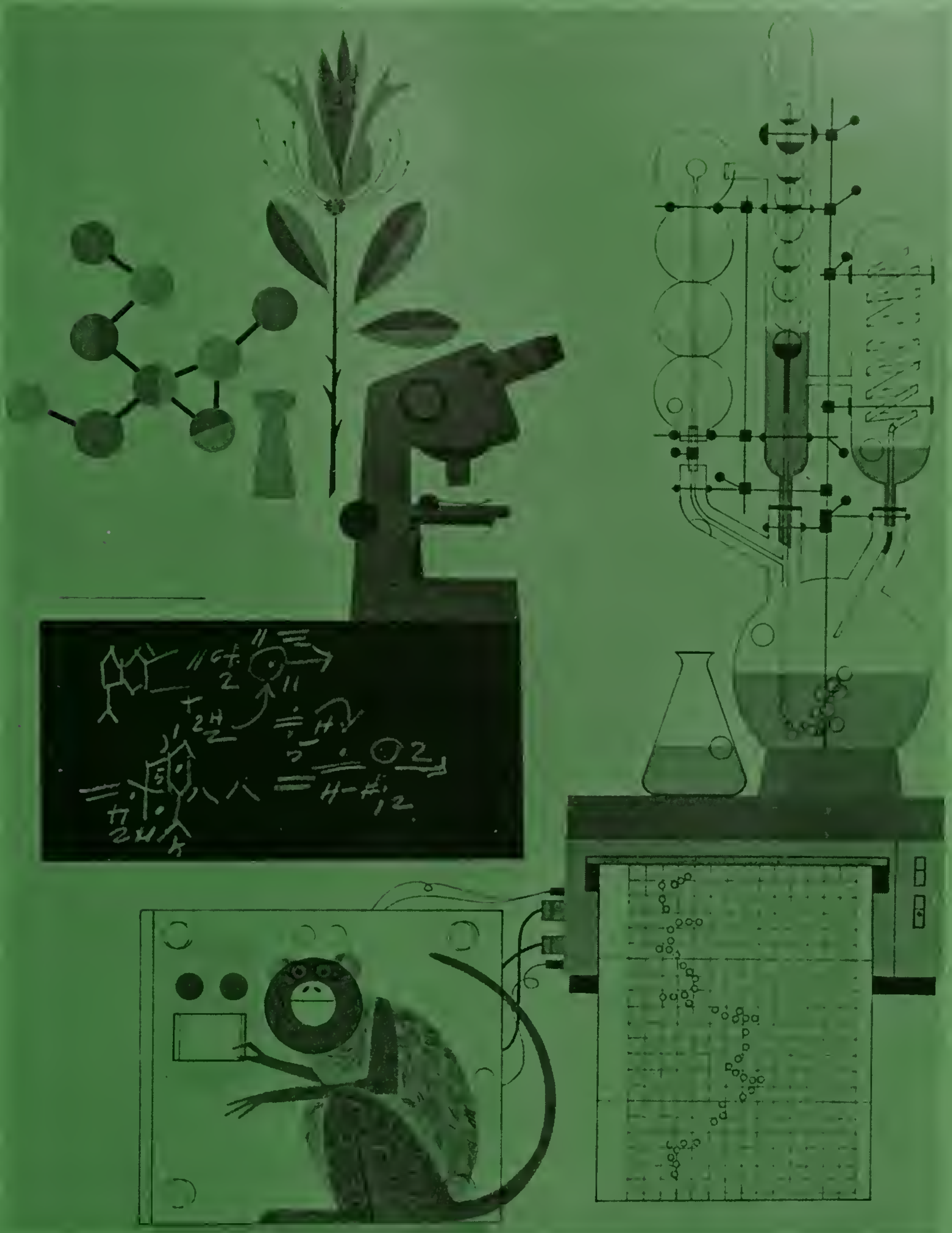


Pennsylvania Medical Society
and
Pennsylvania Medicine
in tribute to the
PHARMACEUTICAL INDUSTRY

THE IMAGE OF THE

A view from the inside

These remarks were presented by Fred Bartenstein, Jr., administrative vice president, Merck & Co., Inc., Rahway, N. J., to The American University's Seminar on the Economics of Pharmaceutical Innovation, Washington, D. C., April, 1969.

In contemplating our own images, we always see two things—what we see, and what we think others see. The two images are rarely the same. When we think the external one is much worse than the other one, we are inclined to turn around what Robert Burns said: "If only others could see us as we see ourselves." It is fair to introduce my subject by saying that the pharmaceutical industry today suffers rather acutely from this reversal-of-Burns syndrome. I shall deal with two starkly different images, and how we think they came to be divergent.

The source of the industry's difficulty appears to be the innovative activity that has taken place in it since the 1930's. Nothing in its prior history aroused much public attention. From around the 1500's its progenitors had quietly supplied raw materials to pharmacy. Pharmacy had not explored very deeply the chemistry of the materials it handled or contributed new things to the science and art of healing. Neither had its suppliers. Innovations in medicine had come mostly from the doctor, by trial and error, in the course of treating patients.

Early in the 1900's some pharmaceutical companies began to produce finished dosage forms of the standard remedies,

> *". . . The patient population in mental hospitals was lightened. The total cost of illness had been reduced by treatment in the home, shortened stays in the hospital, and earlier return to productive lives . . . but it was euphoria . . ."*

so that the pharmacist would no longer need his mortar and pestle. This development helped the pharmacist in filling prescriptions and gave better protection to customers, but it was of small moment to the public.

The first winds of the revolution in chemotherapy began to blow in the 1930's when the Europeans found that sulfanilamide was useful in controlling infectious disease, and chemists were exploring the vitamins. Leaders in the pharmaceutical companies saw the implications for chemotherapy in these early signals. A few companies at first, then a larger number, hired scientists, gave them facilities and funds, allowed them freedom to pursue their interests without excessive management controls, and encouraged publication. In time, close relationships developed with the best minds in chemistry, biology, and medicine. Discoveries and innovations began to flow from industry laboratories and from collaborative efforts with scientists in university and government laboratories.

The companies produced sulfanilamide and invented improved modifications of it. Vitamin B-1 was isolated and synthesized; then B-2, B-6, C, and niacin. By the 1940's, Florey and Chain had furthered Fleming's discovery of penicillin, and the United States drug industry, in team with scientists in government laboratories, developed processes for its large-scale production. Soon after World War II, in collaboration with university scientists, streptomycin and chloromycetin were found. Then came bacitracin and neomycin. Vitamin B-12 was discovered. From massive industry screening tests emerged the useful broad spectrum antibiotics. In the late 1940's came the antihistamines, then the breakthrough in corticosteroids for treatment of inflammatory disease, thiazide diuretics, oral antidiabetics, mental health agents, anticoagulants, and development and commerical production of poliomyelitis vaccine.

In the course of this explosion, the innovative companies had moved into a direct relationship with physicians. They worked with them in basic studies and in clinical investigations. They announced new products directly to them, developed back-up toxicological and pharmacological data, furnished labeling instructions and precautionary information needed, and advertised directly. The public had no reason to know this. The ancient professional dispensing system in which doctors prescribed and pharmacists dispensed was not changed by the industry's accomplishments or its new relationship with medicine. This system was all the public saw. It moved the new more complex products quickly into retail inventories where they were available for use on short notice everywhere, but it veiled the manufacturer behind the medical and pharmacy professions.

Before Senator Kefauver launched his investigation of the industry, those who had made important contributions viewed themselves euphorically. They thought of doctors as grateful for the new tools and of retail druggists as largely advantaged by an armamentarium of products that never existed before. They thought of patients and their families most of all. Things could be done now about pneumonia, blood poisoning, kidney infections, tularemia, pernicious anemia, typhoid, tuberculosis, and poliomyelitis. Better treatment was available for arthritis, diabetes, malaria, and asthma. The patient population in mental hospitals was lightened. The total cost of illness had been reduced by treatment in the home, shortened stays in hospitals, and earlier return to productive lives . . . . But it was euphoria.

In opening his hearings before the Subcommittee on Antitrust and Monopoly on December 7, 1959, Senator Kefauver said:

> "While this country has the best drugs in the world, it would appear from the great number of letters which the subcommittee has received that many of our citizens are experiencing difficulty in being able to purchase them."

In the hearings for two years thereafter, companies which had made major innovations were accused of charging too much for products, making too much profit, using misleading advertising and excessive advertising, spending too much on advertising, using trademarks to keep up prices, unduly influencing government agencies, conducting worthless research, patenting minor improvements, over-patenting, and misusing the patent system; also selling ineffective products and dangerous products, failing to conduct proper clinical investigations, risking patients in clinical tests, exploiting research employees, and overcompensating executives.

The tragedy of thalidomide, which came to light during the hearings, diverted attention to clinical investigation and new drug approval. Higher standards of approval were written into the law, and more restraint was placed on clinical investigation and on drug advertising. The patent law, which had been attacked as a cause of excessive pricing, was left alone.

Although the changes in the Food and Drug Act in 1962 imposed no new requirements that the industry could not reasonably adapt to, there was stress within the Food and Drug Administration and industry, and between them, as the changes were implemented during the mid-1960's. The process was influenced by the industry's new public image. The agency itself was watched and pressed, and sometimes, as a matter of self defense, contributed to the tarnishing of that image. The companies, demoralized, made some bad errors during this period too. Helplessly, they watched each one publicized as typical.

The hearings and this aftermath had severely hurt the industry. It had almost no image before. Now it stood before the public "bad," and critics of it were "good." The field of prescription drugs was revealed as fertile for those who sought advancement in politics, journalism, publishing, and general image building. Consistency was not necessary. The Kefauver hearings, for example, would have made no sense had the industry's new products not been of value; yet the attack switched back and forth between charges of depriving people of needed cures and doing worthless research. The burden of proof of innocence had subtly shifted to the pharmaceutical firms.

The industry, despite it all, prospered and continued the flow of innovations. The oral contraceptives came along; then more antibiotics, non-steroid anti-inflammatories, antiviral agents, new antihypertensives, new anesthetics, new products for mental health, vaccines for measles and mumps, and a host of starts toward the complex problems of cancer alleviation.

That brings us to the present. We have looked back down the road we've traveled. What are we now?

The pharmaceutical industry can be defined simply as the sum of all those enterprises that make and sell chemical and biological products used in treatment of human disease. But there the simplicity ends. There are over 1,300 such enterprises in the United States. A large number are small businesses that make and sell standard formulations, but they run a wide gamut of style and product. Even among the larger firms there is little uniformity. Few make only prescription drugs, and none has more than 10 per cent of industry sales. They take part variously in the production and sale of over-the-counter products advertised to laymen, and drug and feed products for animals. Some are divisions of large diversified chemical firms and companies in the consumer products field. Some are United States divisions of diversified foreign companies. Some sell raw materials to the pharmaceutical industry as well as pharmaceuticals. One has a large wholesale drug operation. There is no single type or style among them, and as the press of public attention has grown in recent years and threatened, the individual firms have tended to become even more individualized. Almost all of the major ones are diversifying—into fields that utilize related skills and energies—hospital supplies, surgical instruments, diagnostic equipment, clinical laboratories, cosmetics, food, lawn and garden materials, and water and air pollution control.

The "bad" public image of the industry tends to fasten on those companies where the innovation has been, or is, going on. This brings us to the image of the pharmaceutical segment of a single company that has been a contributor of new products for the doctor. We see it as a place where people work—people who are trained and skilled in a wide variety of sciences, handling complex and delicate tasks. They are not strange or different. Some have weaknesses and have made errors, as do all, but among them are keen and sensitive people, some brilliant, fully aware of moral responsibilities, anxious to do the right thing, shocked when people make mistakes, and responding to incentives and restraints that others respond to. They have a psychic income that comes from inner awareness of doing useful things.

How do such people in the industry reconcile the two starkly different images we have of us?

The worst generally accepted external view, we know, is that we overcharge for products. It is bolstered by phenomena that we also know—the same company charging different prices for the same product to different customers; prices of major firms being higher than those of other companies; profit rates on sale and capital being higher than in other enterprise.

We see our difficulty as an inability to articulate, to those who have the power and motivation to help, the intangible nature of the true product that we sell, and the means and cost of providing it. The product is not in fact the tangible commodity, but the accomplishment and service it embodies. The sum of all the intellectual accomplishments must of necessity be embodied in these tangible things, and their sale must finance the building of the accomplishments. The building includes the work in research and development, and more than that. Personnel throughout the innovative firms are involved in the creation of the services that are being furnished. But it is assumed we make and sell only the tangible thing—not its true content—and we are measured against the economics of those who merely produce tangible commodities.

The major capital investment that stands behind our real product is the organization of people—not bricks, mortar, and chemical equipment. It is the chemists, biochemists, biologists and microbiologists, doctors, pathologists, toxicologists, pharmacologists, and engineers—their collection over the years, and training, and organization in scientific teams, with multiple skills combined, guided and motivated by planning and insight to attain ultimate objectives. Without them the work product would not emerge. It is the sum, also, of collected skills, experience, insight, and knowledge stored away, and transmitted freely among them. The innate value of such intangibles does not show on balance sheets. Critics publicize our profits as percentages of costs of buildings and equipment, as if we made cinder block and should have equivalent rates based on equivalent capital.

The pricing discrepancies found in our records themselves reflect the dilemma of the elusive nature of our true product and its elusive cost. At any one time any one of our tangible embodiments can be sold for less than all the costs that might be properly allocated to it, above and beyond the direct costs of its manufacture. Artists and authors similarly choose from time to time to sell replications of their productions at prices that do not reflect the true value of their work—but above the cost of producing the replications. Do such prices then become the standard? Who is the judge to pronounce what the proper values of such things are? And where is the judge who can assure that all companies in the industry will price their individual products at all times so that all members of a diverse industry will not be maligned for overpricing?

It is not a fact that people in the industry believe they should, or can, charge what they want—"what the traffic will bear," as the saying goes. All new technology competes with the preexisting. They must in the first instance set product prices at levels that encourage use. They are aware of social pressures. Ultimately new competition comes from somewhere. They know competition and the marketplace are proper monitors of their pricing, and that it induces or reduces their effort as society wills it in its own interest.

> *". . . One charge has been that industry financial support of clinical investigations may be buying scientific support . . . Another charge is that industry advertising overly influences physicians . . . The doctors, of course, have the ultimate voice . . .*

The laws that say there should be no artificial restraint on price are by that token utterly necessary. Anything else in selling of health products is particularly unthinkable. We support vigorous application of antitrust laws. Without them, we could not long survive.

It has been asserted that brand name prescribing insulates too much against price competition, and that the major segment of the industry overdoes this aspect of its marketing method. There is a misunderstanding here also. At the heart of the trademark principle is product and quality differentiation. Customer loyalty to brand is based on customer satisfaction, which in turn is based on quality, product performance, service, and uniform product character over time. Because the pharmacist must dispense as the doctor orders, brand name prescribing diminishes the play of price competition among competitive products at the drugstore level. But it does not or should not at the prescribing level. We do not argue that the doctor should not take price into account when truly equivalent and cheaper products are available. He should prescribe the least expensive product he considers satisfactory for the purpose. But he should be the one to decide which product. Pharmaceuticals have the character of their maker, as do all other products and services. The doctor observes pharmaceuticals in actual use; he knows the patient's reactions; he is responsible for the patient's health; he knows the patient's economic need; and he has no business interest in what the patient pays.

Those in the industry who have succeeded in creating new and valuable products during the 1930's, 40's, and 50's now watch the seventeen year period of patent protection on them end. More of such products are becoming available for production and sale by enterprises that do not invest in creating products and services or in developing markets. Such firms serve the function of obtaining less expensive production and competing on the basis of lower prices. This is as it should be.

As we in the industry see it, society acts in its own best interest when it maintains inducements and incentives that have led the creative in the industry into serving the doctor, pushing toward horizons of the sciences—inventing and developing new drugs and furnishing quality products and services. That system, given time, makes room for those firms that aim merely toward production and marketing. It stimulates and encourages all segments in the industry—to do best what they best can do. Removing or weakening incentives for finding the new and the better, in order that the already-found and the adequate may be more cheaply available, condemns al firms in the system ultimately to commodity production and selling.

For the last year or so, the attack on the innovative firms has focused increasingly on their relations with the medica profession, relations that sprang from their scientific teamwork with the doctor and the communication flow that followed the innovations. One charge has been that industry financial support of clinical investigations may be buying scientific support. That charge presumes our dishonesty, and the dishonesty and unprofessional conduct of clinicians Another charge is that industry advertising overly influences physicians. Advertising is a needed function of all enterprise, and a vital one for those who innovate. Until the new is known and used, it might as well not exist. Creating market is a part of creating product and service. The doctors, of course, have the ultimate voice. They have the power to reject the advertiser that misleads . . and woe to the manufacturer in whom the doctor loses confidence. Prescription drug advertising must by all means be honest. The laws should be severely strict on this score. Industry need not fear such restraint, so long as it is rational It has lived with the strictest of regulation. It has even endured it at moments of irrationalism.

Fundamental problems arise, we have learned, when government regulators of any of the functions of our industry are subjected to public review. Such review is utterly necessary. But science exploring the unknown can never be certain, and medicine is not an exact science Progress in medical science hinges on good judgment and courage in balancing the good and bad. No step forward can be entirely safe. Those inclined to propagandize against our industry—whether involved in the process of public review or communicating to the public about it—know they can attain their goal by emphasizing the bad. They can become vicious with that subtle power. The public servant subjected to it can become too much afraid, and no longer act solely in the interest of science and good medicine. The environment quickly becomes irrational when this occurs. It s a dangerous thing for medicine, and for science. The power to distort in the name of seeming virtue is not without its cost to society, although society so far seems not to have discerned it.

I cannot help reflecting that law and egal processes have become increasingly ealous of the individual's rights—leaning backward to protect him from the mass pressures of society. We seem to be at a different stage in our treatment of organizations of men—companies, unions, industries, and government agencies. Down in the South, there is a saying, "You don't know what war is until you have lost one." We in this industry sometimes feel that society accepts for organizations what it has made obsolete for men—the Star Chamber, the burden of proof of innocence, and the pillory and the stock. Organizations of men, like individual men, respond to fairness. They are not at their best when mistreated.

In examining the economics of pharmaceutical innovation—I would make one final point. Image itself has an effect on innovation. If public opinion is that our industry is all "bad" and must be drastically changed, that in itself saps the industry's incentive, will, and enthusiasm to innovate. It is a deterrent to innovation just like changes in the patent law, or price controls, or any of the other controls that are now being discussed by the architects of change.

We now know we work in an area that will always, henceforth, be open to public review and criticism. That is a measure of our success in making things of value. We know our activity will always be subjected to close government surveillance and control. That is a measure of the need that what we do be done precisely right. We have no reason to fear public review of what we are or do, or the performance of those who regulate us, so long as both processes are objective and seek only to obtain the best in medicine.

The Unfinished Business of Drug Research

Prepared by the Pharmaceutical Manufacturers Association

The hundreds of new medicinal agents that have ushered in the modern age of drug therapy in the last thirty years have been described as mankind's greatest gift in this century. Certainly in lives saved, in pain eased, in health preserved, they have benefitted uncounted millions of people the world over.

In numbers alone the record is impressive. From 1940 through 1967, 848 basic new drugs evolved through the efforts of the pharmaceutical manufacturing industry. Of these, 525 were discovered and developed by American companies. Many others resulted from joint projects with firms abroad or with researchers in private or government institutions.

Old Scourges Disappear

The real story can best be told in human terms—the virtual elimination of once-feared childhood scourges, such as diphtheria, scarlet fever, and polio; the dramatic decline in the deaths of young mothers in childbirth; the sharp reduction in the number of children orphaned by the premature death of young parents. Tuberculosis, pneumonia, many infectious diseases and other ailments are no longer the dreaded afflictions that struck down people of all ages through the centuries—until they began to yield to the discoveries of the past few decades.

Yet the bold record cut by medical science, gratifying as it is, still ranks high in the world's category of unfinished business. For one thing, medical care—like other goods and services—is provided for populations unevenly. The health of people in the more advanced nations is superior to that of people in the developing countries. This is the age-old and persistent socio-economic problem.

The Dilemma of Science

But science, too, has a dilemma—for each new bit of knowledge may only give clues to the solution of old mysteries. People are saved again and again from pain, disability, and death, only to become more vulnerable to complex diseases as yet unconquered. Thus the quest for new and better agents goes on at an ever-quickening pace.

But even as the hunt toughens, the number of new drugs declines. It has been declining since 1959. The economic

No spectacular short cuts lurk on the scientific horizon

risk of pouring money into research grows. Yet the American pharmaceutical industry, instead of pulling back, continues to channel more money and manpower into its scientific programs.

In the wake of the great sulfa and penicillin discoveries of Domagh, Fleming, Flory and Chain, the industry first intensified research. Expenditures reached $50 million annually by 1951. By the end of 1968, they are expected to exceed $500,000,000, ten times the 1951 total. It is easy to see how the half billion dollar milestone has been attained, for it now costs a good many millions to develop a single new prescription drug. It may take from four to as long as ten years from conception to approved use in patients. And only one in every 6,000 tested compounds ever becomes a marketable product.

The Decline in New Drugs

This would appear to be a profligate outpouring of funds, since only twelve new single chemical entities reached the market in 1966. In 1967 the total rose to twenty-five, still only half the number of a decade earlier.

Significantly, all of these twenty-five emerged from pharmaceutical industry research. It has become manifestly clear that despite the many and brilliant contributions of scientists outside the industry—and their output will continue to be essential—only the scientific and technological capability of research-oriented firms provides such priceless ingredients as much of the basic research, and all of the development, production and distribution. The best medicinal in the world has no value whatsoever until it reaches patients.

But if the risk of finding something useful is so real, why are these companies willing to expand research? Will it eventually be rewarding, as successful highrisk investment, and as a boon to sick people in the form of new drug products?

Capabilities and Incentives

To this there is no answer beyond the confidence the industry has in its capabilities and in a business enterprise system that offers incentives to succeed. Without those, of course, industry research would begin to dwindle.

In any event, research-based companies are committed to a widening quest for new products that will contribute to the health and well-being of man. For the scope of the medical challenges confronting us is staggering.

Social Responsibility Is Large

In the United States alone, cancer cripples about a million Americans and kills a quarter million of them each year. About forty-four million persons have some form of arthritis. About four million suffer from neurological problems. Cardiovascular ailments afflict fifteen million and kill at least one million annually. As many as thirteen million may have some degree of heart disease. Mental problems, ranging from mild anxiety to severe psychosis, involve nineteen million. There are each year some 260,000,000 episodes of infectious disease, about half of them requiring medical attention.

Many other disease conditions cry out for solution, such as parasitic ailments that debilitate whole populations in many parts of the world. Thus, even if no other incentive existed, the social responsibility of the industry to find new drugs is an imperative in modern society. It is a basic reason why leading firms continue to build their science and technology, factors that stand by far at their strongest point in history.

The Key Corps of Scientists

About one out of every seven employees in the U.S. drug industry works in research and development. This means 19,000 scientists and supporting personnel. Rarely do great universities and medical centers have the range of scientific disciplines found in major pharmaceutical firms.

In its search for new biodynamic substances the average American drug company spends about 10 per cent of its total sales income on research—or about three times the average of American industry as a whole. Moreover, this effort is financed almost entirely from its own funds, another reason why earnings of the industry should exceed those which do little research or rely upon government aid.

Intensity and range of effort, of course, varies from firm to firm. Usually, from 25 to 30 per cent of company research goes to sustain existing products by improving their medical usefulness, by effecting process improvements, and by employing scientific advances to improve standards.

Where Company Effort Goes

From 60 to 70 per cent of company effort goes into the quest for selective new products in those areas where the company has the most experience, competence, and resources. Obviously, medical marketing goals also affect—as they must in a business enterprise economy—the direction of new product research. Marketing and medical goals coincide closely in today's corporate environment, since both are most interested in new drugs that will work against major diseases rather than in minor improvements of older compounds.

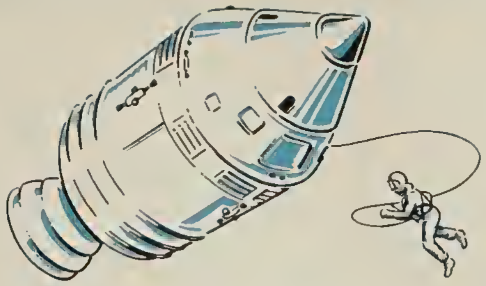
Finally, it has most recently been estimated that about 17 per cent of the industry's scientific effort is devoted to basic research. Here, again, this percentage is higher than in any other industry. And, again, it is financed by industry funds. The hopes for mmediate returns are unlikely, even remote.

On the other hand, excellent research at any level can bring about beneficial results. So distinguished a scientist as Dr. Ernest Chain says he can't tell the difference between basic and applied research. "The only way in which I have been able to classify research is into the categories of useful and useless," he says.

The Painstaking Road

How is industry going about this painstaking and intricate process? Essentially, it is employing time-tested methods. No spectacular short cuts lurk on the scientific horizon. There is no substitute for well-designed studies to establish methods for the synthesis or isolation and the characterization of the active agents. There is no substitute for the careful biological testing of these agents.

At the animal testing stage, the classic principles of pharmacology and toxicology still prevail. However, toxicology today has more emphasis. Animal work is more extensive and covers not only more species but more generations of animals. Thus greater effort goes into



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

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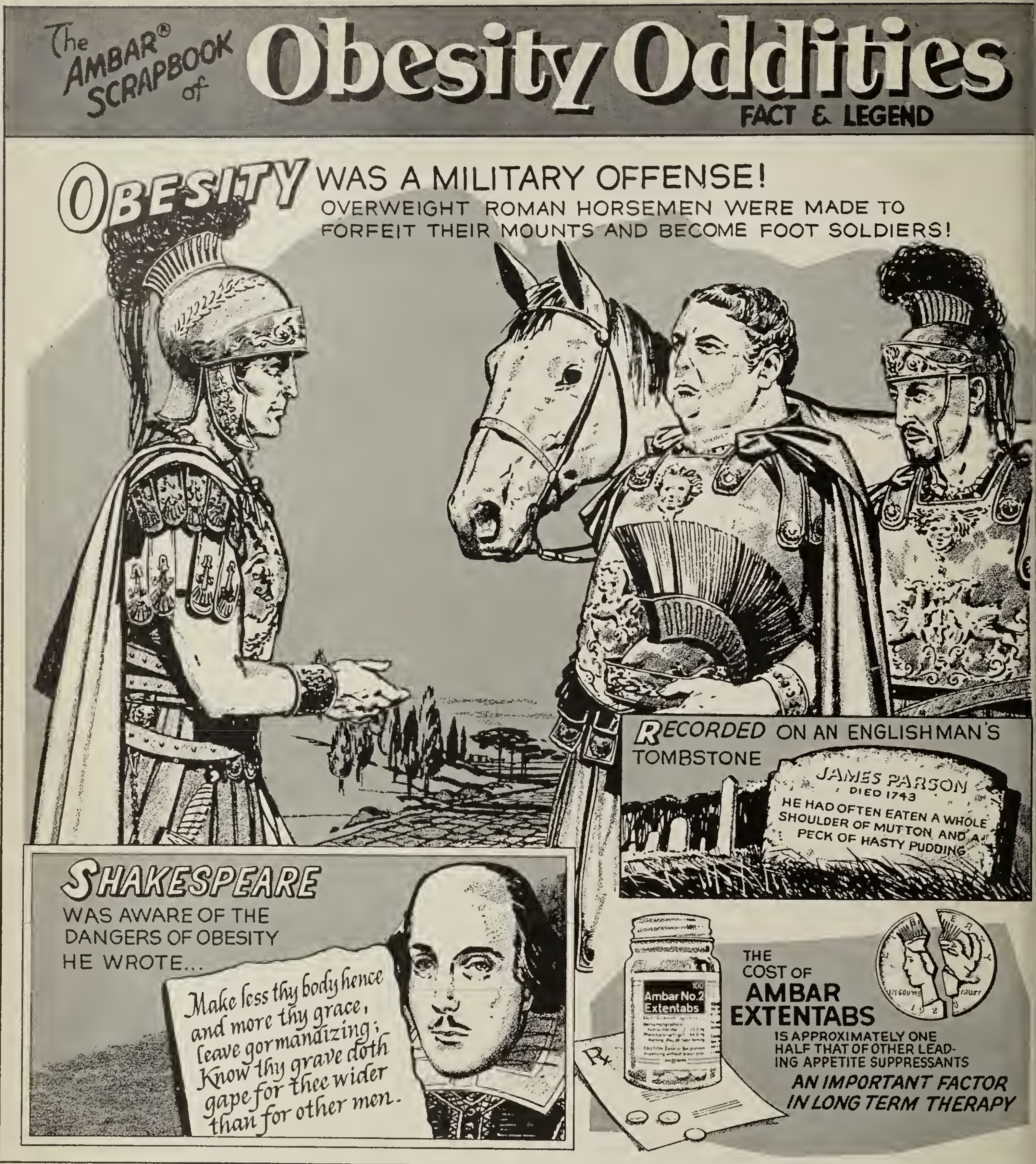
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determining toxic effects before human testing. Trials of drugs in man are also more extensive, partly because refined analytical techniques are available, partly because more exhaustive proof of both safety and efficacy are required by the Food and Drug Administration, and partly because agents are being sought for more complex disease conditions along the frontiers of medicine.

Computer Aids Scientists

The computer has come to the aid of the scientist—and none too soon—with the rapid proliferation of knowledge. The National Medical Library alone stores 200,000 new references from 2,300 biomedical journals each year. By storing and retrieving this flood of data the computer can, in effect, multiply the time of the scientist. Without such help, he would be unable to keep abreast of his specialty—let alone cope with the avalanche of information in related fields of interest.

Quick Answers on Compounds

With this aid he can find quick answers and more rapidly solve problems, especially those involving the identification and structure of various compounds that might have an effect on disease.

A second use of computers is to integrate them into laboratory instruments, thus combining two sophisticated systems for the faster and more accurate correlation of data.

This greatly speeds the analysis of information involving the effects of drugs on animals. Computers similarly aid in evaluating clinical results in man.

An interesting example of the type of instrument that is now basic to modern drug research has the exotic name of Nuclear Magnetic Resonance Spectrometer. It consists primarily of a magnet, a radio-frequency oscillator, and a radio-frequency detector. It is, in effect, a "detective" that delves into the very nuclei of atoms and gets a "fingerprint" of the drug molecule. From this spectrogram, the skilled scientist can determine its possible value as a potential drug.

Atomic energy is another source of value. Complex instruments follow the course of "tagged" atoms within living systems. This ability to study drug action and reaction through radioactivity has become standard procedure.

A New Arm—Elaborate Apparatus

Other elaborate apparatus and sophisticated techniques are a far cry from forty years ago when no one even knew how to separate penicillin from fungal juices.

Today, established, classical methods, aided by instrumentation and expanding knowledge, promise more new drug gains. In addition, there are still vast areas of biological research to be explored. As Dr. Chain observes, "clinical observations on man are a unique and large reservoir" that could lead to new and better agents.

Given the scope and intensity of present effort, what is likely to emerge from industry laboratories in the not too distant future? Better analgesics, hypnotics, tranquilizers, psychic energizers, antihypertensives, anesthetics, and other established categories of drugs? Almost certainly. New compounds in the steroid field can be expected to improve present contraceptives and anti-inflammatory agents. Other steroids will deal with immune reactions in organ transplants and help the body's regulatory machinery run in an orderly fashion.

Better Antibiotics, More Vaccines

Simpler structures for synthetic compounds created from natural compounds—or their synthetic analogues—may produce more effective drugs for conquering pain and treating metabolic disorders. Antibiotics will reach more refined stages and treat infections even more effectively. Better drugs for tuberculosis may be expected.

Excellent progress in virus vaccines seems fairly well assured. Measles—and more recently mumps—have already yielded to the vaccines. New agents will control mental illness more judiciously and possibly make deeper inroads against some forms of cancer.

Hope springs, too, along such frontier areas as molecular biology. Many scientists are doubtful that science, at this point in time, can tinker successfully with the genetic machinery of man or of animals. Nevertheless, new insights into the molecular mazes of the living cell could have great impact on the search for drugs that might influence or control heredity.

The Mysteries Within Cells

In the molecular area, drug industry scientists are seeking answers to many provocative questions. How are the cells stimulated to produce antibodies that fight disease? How are the normal functions of the cell disrupted by viruses? What molecules record memory and affect learning? What role do the nucleic acids play in arranging proteins that are vital to body functions?

These are exciting questions. The answers will come, most likely in bits and pieces, but each new key will unlock another chamber in the incredible mystery of the living organism. For example, in 1967, one team of drug industry scientists discovered how ribonucleic acid triggers the production of interferon, a protein produced in the body in response to viral infection. Such a scientific feat opens the way for a possible new and practical approach to the prevention of viral disease in man.

Industry research today doesn't operate in a vacuum. Nor has it ever done so. It is closely linked both to government and academic research in a cooperative assault on the ills of man.

The Promise of a New Hormone

Take, for example, a new hormone called calcitonin, thought to be a body agent that prevents abnormal amounts of calcium from draining out of bones. As a drug, it might speed the healing of fractures, prevent bone diseases, maintain strong bones among the elderly.

Calcitonin was discovered at the University of British Columbia and is under study by both industry and government scientists. Unfortunately, it is a long way from being an available drug product. It would take sixty million pig glands to yield a single pound of calcitonin. One American drug firm did manage to extract 1/300th of an ounce. So until the molecule can be synthesized, until it undergoes long studies in animals and then in man, until it yields new knowledge of calcium metabolism, until it can be proven both safe and effective, until it can be put into practical dosage forms and produced in quantity, calcitonin must remain a scientific curiosity.

Suppose it does become in time a valuable drug? Is it then abandoned as a research project? Not at all. For the drug industry scientist tries to improve on nature and on original discoveries by altering molecules. It was chemical alteration of natural hormones and other substances that led to many of the most dramatic drug advances of recent years,

Nature made it in living color. Carelessness made it black and white.

9 out of 10 forest fires are caused by people who are careless with matches, with smokes, with campfires. Don't you be careless.

Remember [illegible]

among them the oral contraceptives and the anti-inflammatory steroid agents. Thus calcitonin—once on the market—would no doubt be improved upon in subsequent research.

Only Industry Can Do The Job

If calcitonin, and many another hopeful agent, ever becomes a practical drug, the pharmaceutical industry will have to do the job. Critics of the industry have consistently been unaware that this capability, even in small measure, exists nowhere else. As a result, they have tended to misunderstand the scope and nature of industry research and to downgrade its contributions—even to dictate what they regard as its most desirable future directions.

This is risky business indeed. For it must be realized that drug research in the pharmaceutical industry today is as varied as it is complex. It is very expensive. It must conform to complicated government regulations, some of which may well be of dubious value in advancing drug therapy. The industry requires—and has—a unique and highly specialized corps of trained scientists dedicated to work along the frontiers of knowledge.

The scientific leadership of the industry—even though it seeks and respects the advice of government and of academia—ultimately is best qualified to determine research directions. Surely its record of the last third of a century ought to be proof! And since it has vision, it has the strong, practical support of management.

In essence, the incentive to push ahead must prevail because health needs are vast and still growing. They are indeed unfinished business. Men climb mountains because "they are there." So the pharmaceutical industry thrusts ahead on its basic mission, indefatigably seeking those chemical agents that hold the most promise of conquering pain and disease. No other course is possible, or permissible, as long as the needs of people persist, challenging science as never before in its volatile history.

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Constraints on Innovation in Drug Development and Use

These remarks were presented by Louis Lasagna, M.D., division of clinical pharmacology, Johns Hopkins University School of Medicine, to the First Seminar on Economics and Pharmaceutical Innovation of the American University, Washington, D.C., April, 1969.

In preparing these remarks, I thought it wise to consult several standard reference books to see what consolation and guidance I could derive therefrom. *Familiar Medical Quotations* contained two relevant quotations that were not at all familiar to me. One by Francis Bacon went as follows: "Surely every medicine is an innovation; and he that will not apply new remedies must expect new evils . . . ." The other was attributed to Oliver Wendell Holmes: "I find the great thing in this world is not so much where we stand as in what direction we are moving."

A brief excursion into Roget's *Thesaurus* and *The Synonym Finder* was also productive. The feeling tone I had had for "innovation" was almost entirely benign in nature—for me it was synonymous with "introducing new blood, modernizing." What I had temporarily put out of mind were the denigratory connotations: faddism, diversion, "violent departure from the old." I was even reminded that in Webster's Dictionary a neologism has two meanings: "a new word, usage, or expression" and "a meaningless word coined by a psychotic."

Taking these as a text, or at least as reminders of the scope of the task, I should now like to accept Professor Cooper's invitation to "free associate" about the general state of affairs with regard to pharmaceutical innovation.

It is not difficult to make a case for new drug development—the major cripplers and killers in human illness are now being attacked with popguns instead of cannons. Coronary artery disease, strokes, cancer, arthritis, schizophrenia—who is content with our progress in combatting these ailments? (It may be, of course, that for some of these diseases we will eventually have to rely on prevention and not on cure, but I suspect that few will yet wish to abandon the search for ameliorative remedies.)

It is less easy—but not really onerous—to argue that new drugs can also harm. A powerful chemical is a two-edged sword, and if it is overprescribed, or improperly used, or given in conjunction with other medicaments that can interact dangerously with it, the patient may be injured more than he is helped. Whereas a great deal of attention has been paid to the *search* for new drugs, there has been relatively little work done on how to insure the optimal *application* of new (or old) drugs. Both processes call for innovatory techniques, for new ideas and experiments. What is especially fortunate is the realization that these two goals are complementary and not mutually exclusive, and that the strivings for these goals can proceed without detracting from each other.

For the academician, there are a number of forces preventing his full contribution to the search. To begin with, there is still a significant residuum from the age of therapeutic nihilism. In Osler's time it may have been appropriate to emphasize diagnosis and morbid anatomy, since the therapeutic cupboard was so bare, but one cannot defend such a stance today. (In fact, a reading of Osler's *Textbook* shows less therapeutic nihilism than therapeutic nonsense; Osler *did* recommend remedies, but most of them seem hare-brained in retrospect.) Yet we have not seen a full-scale conversion to the worship of therapeutics, to the conferring of high status and prestige on those who are expert in drug usage. Instead, kudos is contingent on research on etiology or mechanism of action, preferably in animal or laboratory models. The result is to saddle the field of medicine with quantitative and qualitative deficits in manpower, space, and facilities for the task required of modern therapeutics.

Second, the very success of the drug industry has caused its research efforts to be associated, in certain academic minds, with crass commercialism. The advertising excesses of years past, the parade of "me-too" drugs, the publicity attendant on Congressional and journalistic "exposés"—all have acted to incite scorn and condescension for even the research-oriented aspects of industrial life. Needless to say, active collaboration between academic and industrial scientists is not fostered by such attitudes, which often relegate the "drug-tester" to the bottom rung on the university ladder.

Nor has academic pharmacology helped. It has become traditional for most university pharamacologists to occupy themselves with mechanism of action studies or "basic" research rather than with new drug development. In part, this is a comfort-making device, since it is an extraordinarily difficult job to search for new drugs with imagination and creativity. The Paul Ehrlichs do not come along often in history. In another sense, however, the academic disaffection arises out of a realistic acknowledgment of the sorts of things that a large, well-staffed, well-financed company can do infinitely better than a university department—such as screening soil samples or drugs methodically.

Furthermore, the decline of academic pharmacology at present militates against dramatic help from this quarter. Major universities have taken to questioning even the need for a separate department of pharamacology, or at least the need that it be staffed by card-carrying pharmacologists. At a time when drugs are more important than ever, and HEW officials clamor for more and better teaching of therapeutics, the universities are gleefully castrating the discipline of pharmacology.

Still another factor dampening the enthusiasm of the nonindustrial scientist who is interested in new drugs is the difficulty in establishing the superiority of a new chemical to what is already available in the market. If a disease has been essentially untreatable in the past, *any* therapeutic activity will be acknowledged as progress. But what of a field where a number of active drugs are already available? Since the "power" (in a statistical sense) of our research design is often limited, establishing significant differences between drugs is often difficult, so that one tends to "prove the null hypothesis" over and over, asserting that a new drug is on the average no better or worse than existing medicaments.

Such a conclusion may be arrived at for a variety of reasons:

1) It may be true; the new drug and the old may be interchangeable.
2) It may be statistically true, but biologically false; two drugs might, e.g., each treat successfully 50 per cent of the patient population, but each a *separate* 50 per cent, so that if properly applied the two drugs could cure *all* of the population.
3) The drugs may be alike in terms of therapeutic impact, but dissimilar in terms of some other important variable, such as toxicity, palatability, convenience of administration, etc., so that a definitive establishment of such differences would reverse the initial conclusion of "no difference."

At the governmental regulatory level, constraints arise from the barriers to introduction of a new drug, the inability of a manufacturer to exploit it uninhibitedly at the commercial level, and the possibility of precipitous and cavalier removal of a drug from the market. There is no question, I believe, that at least the immediate goals of the public and the pharmaceutical industry are not isomorphic, although they overlap. I doubt that they can ever be made so. If this be the case, then the public needs at least a friend in court in regard to drug control. What industry resents, I believe, is the possibility that the public may also (via the regulatory agencies) own the witnesses, the prosecuting attorney, the judge, and the jury.

If the adversary system is a good one, there should be merit in a system of checks and balances so that neither industry nor the FDA-type agency becomes too powerful. There must be a point beyond which pre-clinical toxicity or clinical trial requirements become stifling and excessively inhibitory, with a resultant lag in new drug development. If the only sure way to avoid criticism for having allowed on the market a drug that later turns out to be unpleasantly toxic is to reject all new drug applications, it is also the way to insure that no new effective drugs are delivered to the public for its use. The peremptory withdrawal of a drug in response to publicity or political pressures may temporarily turn off the heat, but it is hard to believe that in the long run bad decisions of this sort are really in the public interest.

The complexities of recording and reporting patient consent, investigator's credentials, protocol design, and test results to the appropriate government monitor must hinder new drug development to some degree. Again, the law of diminishing returns surely obtains here, but at what point is difficult to say. It is a fact that it often takes a long time to achieve approval of a new drug; how much of the delay is unnecessary and due to an inefficient and cumbersome system is open to debate. Unfortunately, the process is not open to scrutiny, so that those of us who are not participants often feel like the confidants of a couple whose marriage is on the rocks and whose separate description of private intrafamilial squabbles are so disparate as to suggest that they are describing *different* events rather than the same one.

For industry, there are serious economic constraints. The "good old days" when drug houses could promote their products with an exuberance reminiscent of the frontier, not worry excessively about monopoly suits and restraint of trade settlements, and look forward each year to a euphoric report to the stockholders seem to be gone. I would be the last to shed a tear about some of these changes, nor do I suggest that a tighter economic picture is necessarily to the disadvantage even of the drug houses. A critical stocktaking of research programs and priorities was probably long overdue in many firms. Industry has tolerated its share of untalented research directors, scientists, and medical men. In a sense, the halcyon days were probably characterized by too little negative feedback for irresponsibility, scientific ineptitude, and lack of resourceful leadership.

The question now, however, is a different one: Has the economic situation approached the point where, e.g., long-range programs are being sacrificed to short-term needs? In the desire to satisfy the stockholders, will management be tempted to sack large numbers of employees? To drop "gamble" programs? To concentrate on wellplowed fields because they seem "safer" than unmapped ones?

What of the economics of drugs? Will companies stress ever more the ultimate marketability of a new drug, as opposed to its need by the public? Will another oral analgesic or minor tranquilizer be pursued with vigor because the sales team believes such a new drug can be sold, while a drug for obsessive-compulsives or patients with diabetes insipidus is shelved because the realities of life make a search for such a drug financially catastrophic? What of a cure for a disease that afflicts large numbers of people but only in South American, Asian, or African countries too poor to purchase the drug?

Let me now throw out, for your consideration, some proposals that might improve the present climate:

1) We need more research in the sociology of prescribing and drug demand. Why do physicians prescribe one drug with enthusiasm and neglect another that seems essentially the same in terms of effects, both good and bad? What underlies patient demands for drugs? Is prescribing a scientifically justifiable act in most instances, or one that is in essence a desire to provide the patient with something that proclaims the doctor's power to modify disease? (It is surely most often a mixture of the two, but data on the point is hard to come by.) How much time and money could we save if we knew better how to aid the patient in self-diagnosis *and* self-treatment in conditions where the doctor can be successfully bypassed?

Ways must be found to involve the regulating agency, the industrial complex and the academician more meaningfully in each other's affairs.

2) Academic pharmacology and clinical pharmacology need a shot in the arm. One way to do both would be to appoint, as heads of pharmacology departments, people who are clinical pharmacologists. It is my inclination to believe with passion that there *is* a discipline of pharmacology and that the approaches and techniques within its purview must not be lost. The (often just) accusation that pharmacology teaching is at present largely irrelevant to the needs of students and physicians would be less valid if such teaching were tightly tied in to real life problems in the clinic and the hospital bed. Non-clinical pharmacologists are unlikely to favor such an approach.

Another step would be to create chairs of experimental therapeutics, to encourage research on all aspects of drugs, including their actual use in the institution or community—a therapeutic monitoring of the quality and quantity of prescribing—and on how to teach knowledge about drugs most effectively.

3) Ways must be found to involve the regulatory agency, the academician, and the industrial complex more meaningfully in each other's affairs. I have long been impressed by the troubles created by ignorance, and cannot believe that our lot will be any easier if we continue to behave like those figures on old European church tower clocks, each appearing to the public's gaze periodically, then retreating from view, to reappear at a later date but never to confront, touch, or communicate with the other figures on the clock.

It would be depressing indeed if the academic world could not aid, in some way, people in industry and the FDA. I would be equally surprised if industrial and marketing know-how could not aid the university in its attempt to study (and improve upon) drug usage. The FDA has had a great deal of experience over the years in regulating prescription drugs, and some of this information would certainly be of help to both industry and the profession.

4) Some of our present hang-ups in regard to clinical trials might be relieved if we were to become more involved in an analysis of the relationship between patient variables and response to drugs

(whether beneficial or toxic). To begin with, such efforts will of necessity often be in the nature of retrospective "fishing expeditions," using computers to elicit leads that can then be pursued in prospective studies. It is through such hunts for meaningful correlations that we will ultimately be able to tailor drug therapy to individual needs in advance rather than rely on trial and error. Success along these lines will also render more glamorous and intellectually rewarding comparative drug trials, as we dissect individual clinical entities and discover that populations previously considered homogeneous are in fact nonhomogeneous and that we can begin to explain why people respond differently to the same drug. The importance of tidying up our nosology for improving our understanding of disease, the sensitivity of our drug trials, and the validity of our conclusions cannot be overemphasized.

5) While our techniques for evaluating the desired effects of drugs are in pretty fair shape, our quantification of the side effects of drugs leaves a lot to be desired. If we could assemble reliable data of this sort for the several drugs available to treat a given symptom or manifestation, we would be in a much better position to make scientifically defensible choices and value judgments. Dr. Lawrence L. Weed has forcefully convinced me that in the field of therapeutics, as well as elsewhere, the computer probably represents our one hope for bringing into effective play the masses of data being accumulated daily. We have outsmarted our own brains. There is too much to remember about drugs—their names, doses, indications, contraindications, incompatibilities, etc. How much better off we'd be if we could pose all our therapeutic problems to a computer programmed with up-to-date information on the probability for good and mischief of the various drugs available, the relevant warnings, etc., so that our decision could be made with the comfortable feeling that we hadn't missed the boat somewhere! (I do not anticipate that we will ever be spared the need to pick and choose, but the behavioral repertoire, as it were, could be exposed for us to choose from.) Needless to say, this presupposes that reliable p values for therapeutic and toxic effects will be known, and to this end research is needed to collect the data upon which accurate programming will be based. (The central data bank will of course have to be constantly updated.)

6) Why not open up, to the fresh air and light of public scrutiny, the process of FDA regulatory review and drug recall? Can we really correct anything that needs to be corrected in these processes if they are not visible to the glance of the (relatively) unbiased scientist? Can we devise appeal mechanisms to safeguard industry from caprice and the regulatory agency from malicious slander? Are we imaginative enough to devise ways to penalize unreasonable *delays* in processing NDA's effectively as we now seem to reward foot-dragging? Can we spread the responsibility for approval, rejection, or drug recall to the profession or the universities (or both) so as to improve the quality of the decisions, optimize the length of time for such decision-making, and ease the burden of the reviewing officers? (One can visualize with ease, e.g., a host of problems arising out of the Drug Review Project of the National Academy of Science, with such radically different courses of regulatory action being required, e.g., for antibiotic combinations and analgesic combinations, that the wisdom of a Solomon would be challenged.)

While our techniques for evaluating the desired effects of drugs are in pretty fair shape, our quantification of the side effects of drugs leaves a lot to be desired.

And while we're about it, why not examine with care the purposes and functioning of our "informed consent" techniques, and of the drug advertising strictures that have evolved? If we agree on the goals of such controls, experiments come readily to mind to test the efficacy of our current methods.

7) Do we need tax incentives, contracts, or other societal prods and lures, to spur interest in "long-shot" research programs, the search for drugs to treat rare diseases, or the common diseases of poor countries? From the standpoint of the public weal, how do we keep important projects from falling between cracks because of rising economic pressures?

To go back, finally, to the beginning. Innovation for the sake of innovation is only of slight interest to me, although I admit that it is a phenomenon not unworthy of attention. But society still requires the expenditure of a lot of innovatory energy. Change may not be equivalent to progress, but it is nevertheless essential if progress is to occur.

In discussing constraints on innovation, I have attempted to present the problems as fairly as I could. Our actions to ease constraints should presumably be motivated by an honest appraisal of the cost-benefit ratio in each case: If a constraint is "expensive" for society and "buys" little in return, it deserves to be ditched. If a constraint is simply exercised and on balance beneficial to most, there can be no argument about the need for its continuation.

But with most constraints, we will find a picture painted in runny water colors, rather than a sharply etched one. And it is in just such situations that men of good will must weigh the pros and cons of alternative courses of social action and select the path that seems wisest, being always ready to shift course if we are proved wrong by experience.

Francis Bacon ends his essay "Of Innovations" in a fitting manner:

"And lastly, that the Novelty, though it be not rejected, yet be held for a suspect: and, as the Scripture saith; That we make a stand upon the Ancient Way, and then looke about us, and discover what is the straight, and right way, and so to walke in it."

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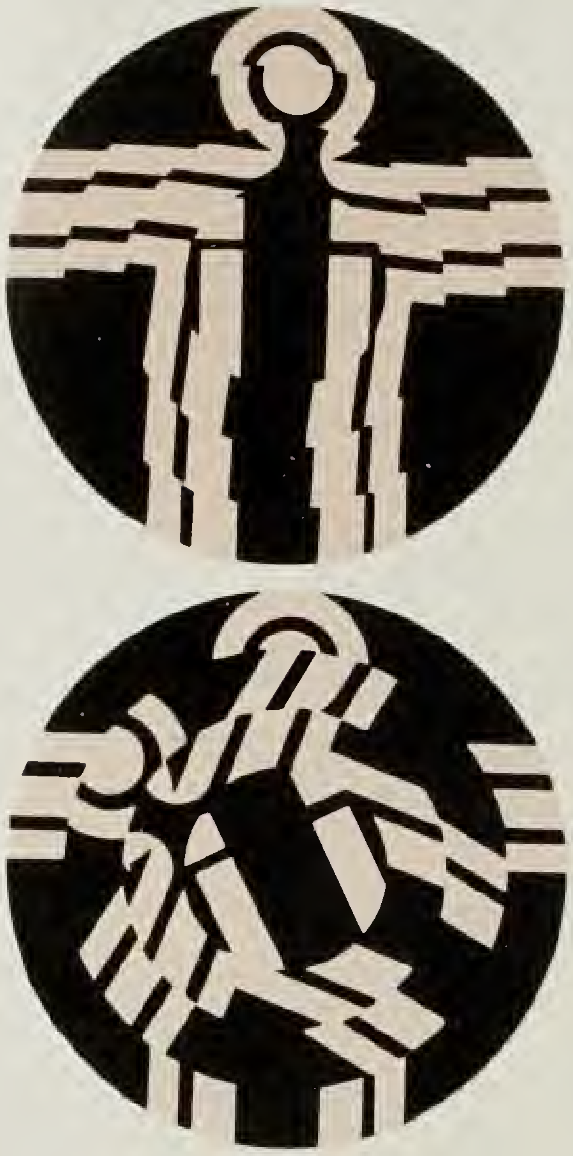

The Drug Industry Villain or Hero?

An article by E. Claiborne Robins, President, A. H. Robins Company. Reprinted from *Business Today*.

In these days when government subsidy has become a way of life for enterprises of all types—including research for industry—pharmaceutical manufacturers in the United States are unusual in that they have continued to pay their own way. Relying far more heavily than most businesses on scientific research, the industry has continued to finance 97 per cent of its own, with only 3 per cent backed by tax subsidy.

In private industry as a whole, 55 per cent of all research is financed by the federal government. Federal subsidies provide 88 per cent of research in aircraft and missiles, 62 per cent in electrical equipment, and 26 per cent in the highly competitive motor vehicle business.

The pharmaceutical industry, whose task is to seek and develop better medicines for today and tomorrow, could not exist without effective research. In the year 1967 alone, drug manufacturers spent a total of $462 million for this purpose—and the costs are steadily mounting. During the past decade, industry expenditures for research have increased at a rate more than twice as great as its increase in sales.

The drug manufacturers prefer to have it this way, for they are staunch believers in the free-enterprise system that has made our country great. But

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REFERENCES: (1) Sands, R.X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M.J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, Jr., J., and Kay, L. L.: Southwest Med. 42:30-32, 1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss B.: Clin. Med. 4:307-310, 1957.

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n spite of its record of self-reliance, and ts achievements in conquering many crippling diseases, the industry in recent years has become a favorite "whipping boy" for agencies of government. Not only is it the most regulated of U.S. ndustries, but it bids fair to become the most maligned and misinterpreted.

We are constantly under "investigaion" by agencies of government which picture us as selfish extortionists who prey on human misery. We are accused of charging exorbitant prices for drugs, when the federal government's own consumer price index shows that prescription drug prices over the past ten years have declined steadily, while the cost of everything else has continued to rise.

In less than ten years, according to the Bureau of Labor Statistics Consumer Price Index, drug prices have declined 10 per cent. Moreover, drugs now take only 9.9 cents of the health-care dollar—compared to 11.7 cents in 1957. Clearly, the industry has been responsible for much of what has been done to hold down the rising costs of medical care.

In contributions to human well-being, no other industry can match the record of the pharmaceutical manufacturer. In 1930, average life expectancy was only 59 years. By 1940 it had risen to 62, and today it stands at almost 70. Five million people who are alive today would not be, had it not been for drugs developed since 1940.

Whole areas of disease have been wiped out entirely, and others have been slowed down. The quarantine signs that used to be so common in our country—for scarlet fever, diphtheria, smallpox, and other diseases—have disappeared. Pneumonia, which used to be a dreaded killer, usually is conquered now by an application of antibiotics. President Johnson is living evidence that a heart attack need not be "the end of the line."

Since tranquilizers were introduced into the world market, in 1956, the population of mental hospitals has decreased dramatically. These hospitals today have 68,000 fewer patients than in their peak year of 1955. In the year 1956 alone, the number of such patients decreased by nearly 8,000.

Thanks to the efforts of the U.S. health team, infants and children now have a far better chance of living to adulthood. Since 1940, the death rate for children under one year old has dropped 54 per cent; for children one to four years, 66 per cent; and for children five to fourteen years, down 60 per cent. Reductions in death rates, and in time lost from work due to illness, have contributed much to the economy of our nation and the world.

One authoritative study indicates that the national output in the United States has been expended in a single year by as much as 7½ billion dollars—as a result of improved medical treatment and usage of drugs for just four diseases.

Even in areas which have not yet been conquered, medical science and drug therapy are on the march. Survival rates from cancer—our number one target, along with heart disease—have improved from the 1937 rate of one in seven to one in three today. Early diagnosis, better surgical and radiological techniques, and more than a dozen new therapeutic agents are responsible.

So many new drugs are now available that seven out of ten prescriptions written today are for drugs that were not even known ten years ago. These new drugs—almost all of them synthetic, and born from chemical research—are the disease killers which we are proud to say came from the American drug industry.

The United States, operating under the free-enterprise system, has set the pace in new drug discoveries, with 525 out of the 848 new drugs introduced since 1940. Ninety-two per cent of the new U.S. drugs were produced in the laboratories of private industry. The country responsible for developing the next highest number is Switzerland, with fifty-four, followed by Germany with thirty-nine and England with thirty-eight. In Communist-dominated countries, under a non-incentive system, not a single worthwhile drug has been produced in more than fifty years.

The average new drug takes up to eight years to be made ready for the market, because of the need to make certain it is safe and effective. For each new drug that reaches the market, up to six thousand may fall by the wayside—a factor which makes ours a "high risk" industry. These "dry holes" account for much of the expense of marketing a new product—which can run as high as several million dollars. A profit margin on already existing products is necessary in order to invest that much on new ones, which at the outset are always an unknown quantity.

Much is heard these days about the "high cost of drugs." The subject has engaged the attention of the U.S. Congress, and of the president himself. But little if anything ever is said to indicate that the trend of drug prices over the last ten years has been steadily downward, with everything else moving upward.

The rising cost of living is a matter of concern to all of us. But there is far less talk about the high cost of color television, or the high cost of automobiles, or the high cost of a steak dinner, than there is about drugs. Why is this? I submit that basically it is because no one minds paying for the things he really *wants*—and no one wants to be in the position of having to buy medicine of *any* kind, at *any* price. Even if it were possible to sell drugs at one-third of their current prices, many people still would consider the price too high.

But let us look at a few examples of what today's drugs can provide. Antibiotics, which may cost about $15 per course, cure diseases that previously could not be controlled at all. They eliminate hospital time entirely, or reduce it to a bare minimum, and save hundreds of thousands of man-hours for the job. In one disease area alone, mastoiditis, a typical hospital stay before penicillin was introduced was twenty-one days—and the death rate was high from the serious operation that was required. By 1940 standards, the cost came to more than $1,000—if the patient survived. Today, a surgeon hardly ever sees a case of operable mastoiditis—all because of about $15 worth of penicillin!

This story is repeated time and time again with other diseases. So today's medicines really *save* in the long run. Before 1940, with a mere handful of exceptions, drugs cured nothing—they only made a person feel more comfortable, or built up his system to fight any disease that might come along. Today we have conquered polio, and influenza, and many others.

When you consider that today's medicines may keep you out of the hospital, reduce the length of an illness, or even save your life, they are truly a great bargain. But few of us want to think in these terms, for we prefer to think we are not going to be sick!

The average retail price of a prescription today is three dollars and forty-nine cents—out of which the manufacturer's net profit is eighteen cents. How does that compare with a bottle of your favorite brand?

> *". . . We continue to be one of the great unknowns of American economic life. Except for a few who recognize the monograms on our tablets and capsules, most of our ultimate customers do not even know who produces their drugs. This stems in part from the peculiarity of the system under which a product is selected by a physician for the consumption of a patient. We who make the products have little dialogue or identification with the general public . . ."*

Yet the hue and cry over drug prices continues, especially in the halls of Congress and the agencies of government. Bills have been introduced, in fact, which would place federal controls on drug prices, or would require the physician to prescribe so-called generic drugs rather than brand-name products.

Those who argue for the use of generic drugs *only* do so on the theory that they provide "the same product for less money." But even among the best-informed scientific people, considerable doubt exists that all manufactured drugs which contain the same basic ingredients are in fact therapeutically equivalent. This is a premise that is still hotly debated.

Generally speaking, manufacturers of brand-name products—who stake their name and reputation on them—maintain expensive research and development facilities and staff to back up their output. This involves considerable operating overhead. Many (though not all) manufacturers of generics maintain no such facilities, and therefore can produce a product at less cost. By the same token, these smaller firms have less at stake, for they do not back their products with their company's name and reputation.

There are some good generic products available, but in many instances such drugs are produced without the painstaking care lavished on products which a manufacturer identifies with his own "brand name" and reputation. Hardly anyone these days would buy a shirt with the label of an unknown company, a television set or refrigerator produced by an unknown manufacturer. Why should anyone risk his most valuable asset, his health, on the use of an unknown drug product?

We in the pharmaceutical industry do not insist that brand-name drugs alone are reliable. We only insist that the important element is the reputation of the manufacturer. In the long run, a careful, conscientious, and research-oriented company is a far better bet—especially when your health and possibly your life are at stake.

In most cases, the generic drug of today is merely the brand-name drug of yesterday. If a pharmaceutical manufacturer is not allowed to make sufficient profit to operate the very expensive research and development facilities required, where will the new products of tomorrow come from?

At present, new discoveries—in the drug field, as well as in other fields of endeavor—are protected for a period of years by patents. The present cry over "the high cost of drugs" has even included calls for an end to our patent system, which in most cases has provided the incentive for thinkers to devote their lives to new findings. No segment of American life has a greater need of patent protection than the drug industry, with its huge investment in research looking to the future.

We in the drug industry consider it is eminently proper that there should be government supervision and inspection of our activity, with its great potential as regards human life. We approve, and cooperate fully with, the federal agencies set up for this purpose. In recent years, however, we believe the regulation procedure has been carried to excess. We are now under governmental control from one end of our business to the other.

At the same time, we continue to be one of the great "unknowns" of American economic life. Except for a few who recognize the monograms on our tablets and capsules, most of our ultimate customers do not even know who produces their drugs. This stems in part from the peculiarity of the system, under which a product is selected by a physician for the consumption of his patient. We who make the products have little dialogue or identification with the general public.

A recent survey pointed out that only one-quarter of the U.S. populace could name even a single prescription drug firm. No one could name as many as seven. I am not saying that one must be known to be loved—but perhaps it might help to counteract our continuing trial by Congress and the newspapers, which usually treat us as if we were the pirates of Tripoli!

In spite of the headlines and the continuing attacks, we of the pharmaceutical industry are proud of our calling and of what we have done for the health of the nation. We believe at long last the public may be approaching some understanding of our problems and what we are doing to overcome them. Basically, Americans are a fair people—and when the facts are known, they will make a fair judgment. Our biggest job is to communicate those facts to them.

PHARMACEUTICAL MANUFACTURERS ASSOCIATION

P·M·A

representing companies that produce about 95 percent of the prescription drugs marketed in the United States

WHO?

The Pharmaceutical Manufacturers Association is a non-profit, scientific and professional organization. Its active membership comprises approximately 130 firms principally engaged in the production of prescription drugs. These are the products prescribed by licensed medical practitioners and dispensed by licensed pharmacists.

Membership is voluntary. The present members account for about 95 percent of U.S. sales of products of the "ethical" type.

WHEN?

PMA was founded in 1958. It is the successor to the American Association of Pharmaceutical Chemists, organized in 1907 and renamed the American Pharmaceutical Manufacturers' Association in 1922; and to the National Association of Manufacturers of Medicinal Products, founded in 1912 and called the American Drug Manufacturers Association after 1916.

WHY?

PMA has four principal objectives:

1. To encourage consistently high standards of potency, quality and purity for pharmaceutical and biological products for cure, mitigation, treatment, prevention and diagnosis of disease.

2. To encourage research toward development of new and better medical products, better facilities and methods for the pharmacological and clinical evaluation of them, and safer methods for their manufacture, packaging and transportation.

2. To disseminate to the pharmaceutical industry information on government activities and policies and other material of special interest, and to the news media, consumers, and other special "publics" information of common interest and significance.

4. To work constantly and closely, on a very broad front, with other professional associations or groups in the health field, with allied industries and with government authorities for the advancement of medical science.

WHAT?

PMA is often regarded as a scientific or professional society for improvement of the public health and well-being because of its great emphasis on technical matters.

To cite just a few examples, PMA studies drug analyses, clinical drug evaluation, toxicology, plant maintenance, efficient packaging and production methods, microbiological assays, spectrography, maintenance of sanitary conditions, materials handling and aseptic procedures.

PMA carries out other professional functions. Included among these are its informational, educational and liaison activities involving governmental bodies, its own members and nonprofessional public and private groups. Examples are found in PMA's regular and periodic publications, statements to legislative committees and responses to individual inquiries from any source.

While PMA is alert to advances in drug therapy generally, it does not in any way concern itself with the specific products, prices, distribution, promotion or sales policies of its individual members. It does not maintain or supply information on such matters.

HOW?

PMA's activities are conducted by its membership "Sections" and by its permanent staff. The association is governed by a Board of Directors of 30 members, one-third of whom are elected each year at an annual meeting of the PMA membership. There cannot be more than one Board member from any one firm. Principal financial support is derived from dues based on the annual sales volume of member firms.

There are ten Sections: (1) Biological, (2) Medical, (3) Quality Control, (4) Production and Engineering, (5) Research and Development, (6) Financial, (7) International, (8) Law, (9) Public Relations, and (10) Personnel.

Every PMA member firm may designate representatives to each section and may have one vote in a section. Section activities involving expenditures, conflicts with jurisdictions of other sections, and Association policy matters are subject to the approval of the Association, its directors or its officers.

WHERE?

PMA headquarters is in the Madison Building in Downtown Washington.
The address: 1155 Fifteenth Street, N. W., Washington, D. C. 20005.
Telephone: 202—296-2440.

The 10 Sections of the PM

1. Biological:

Composed of biologists, biochemists, veterinarians, pharmacologists, and other scientists in related fields. Concerned with technical problems involving biological products, including those licensed by the National Institutes of Health and the Agricultural Research Service; product sterility tests, pyrogen standards, biological standards; blood products and derivatives; microbiological and pharmacological assays; biological manufacturing problems of general interest; and liaison with NIH and ARS.

2. Financial:

Composed of financial administrators and their key staff personnel, including treasurers, controllers, and often fiscal specialists, devoted to the study of domestic and international funding and to accounting and costing methods; federal and state taxation; taxation of foreign business; statistical methods; electronic data processing; operational efficiency; inventory control; and functional relationships of the financial departments with other company departments.

3. International:

Composed of line executives, lawyers and industrial property rights experts, public relations officers, financial, personnel and technical experts interested in the international operations of PMA member firms. International Section has various committees studying a number of specific operational, public relations and technical areas.

4. Law:

Composed of attorneys, administrators, and patent specialists, and concerned with general legal problems of the Association, its sections and committees; regulations and procedures of federal, state, and municipal agencies; foreign law problems; legal aspects of drug labeling; patent and trademark problems of general interest; federal and state legislation; and legal aspects of taxation.

5. Medical:

Composed of physicians, although other representatives of member firms can attend meetings as observers. Devoted to clinical research problems of general interest; medical department administration; relationships of company medical departments with other departments; relationships of the drug industry with professional societies; medical aspects of the evaluation of new drugs; medical manpower and training problems; and specific clinical and pharmacological research projects supported by the Association.

6. Personnel:

Composed of administrators, job analysts, industrial relations and other personnel-related specialists. This Section is concerned with the most effective use of human resources in the industry, employee relations programs, the exchange of information and practices with the academic community and government, and solutions to equal opportunity and urban affairs problems.

7. Production and Engineering:

Composed of administrators, engineers, and plant superintendents. Involved with production, plant engineering, maintenance, packaging, safety, and allied problems; relationship of production departments with other company departments; inventory and production control; production manpower problems; materials handling; automation; plant expansion problems; production equipment; and special production techniques.

8. Public Relations:

Composed of administrators and communicators expert in evaluating public and professional attitudes, dealing with the mass communication media, identifying and articulating th common interests of the pharmaceutica industry and the public, and creating a more favorable climate for mutual progress and benefit.

9. Quality Control:

Composed of chemists, pharmacists, and other scientists working on drug standards. Devoted to administrative problems related to quality control an to studies of standards, methods of assay, tests, tolerances and related problems. Also maintains contact wit the official compendia and with appropriate governmental agencies concerning problems in those areas.

10. Research and Development:

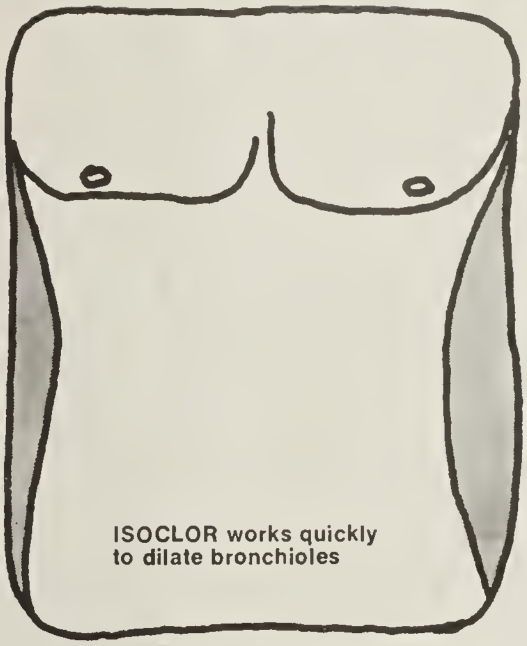
Composed of research administrators, chemists, pharmacologists, biologists, physical chemists and other scientists whose primary interests are in the research field. This Section concerns itself with the administration of research departments and their relationships with other company departments; scientific manpower problems; pharmaceutical applications of physical chemistry techniques; physical chemistry laboratory equipment; distribution of physical chemistry data; organic and biological chemistry problems of general interest; scientific literature; indexing and retrieval of information; pharmaceutical development problems of general interest; new materials and techniques in pharmaceutical development; contact with governmental research groups, particularly at the National Institutes of Health and the National Research Council; research and pharmacological problems connected with the evaluation of new drugs; and animal testing and screening techniques.

The Permanent Staff of the PMA:

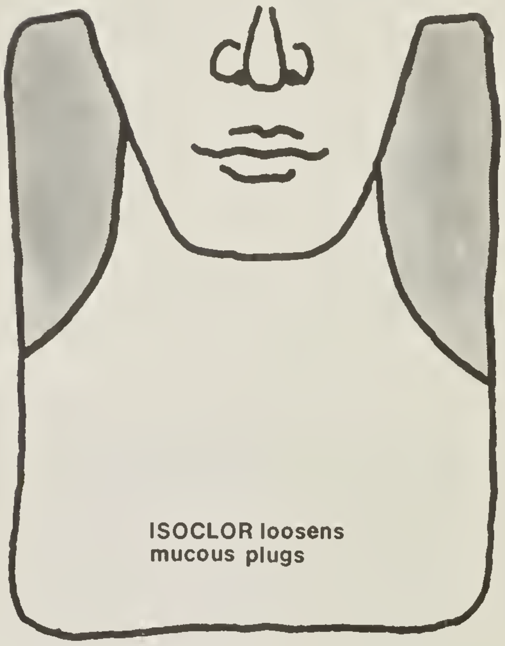
The permanent staff at PMA headquarters includes over 30 individuals with professional experience in association and business administration, chemistry, medicine, pharmacology, pharmacy, journalism, advertising, law, economics and teaching. Under the Office of the President are five departments: Administrative, including Economic Research; Scientific and Professional Relations, including Medical Relations; Legal; Public Relations; and International.

HERE ARE THE COLD FACTS:

ISOCLOR effectively decongests nasal passages

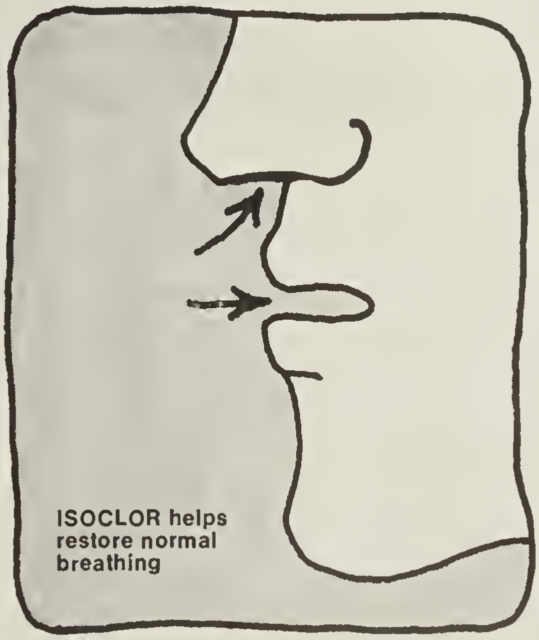


ISOCLOR works quickly to dilate bronchioles



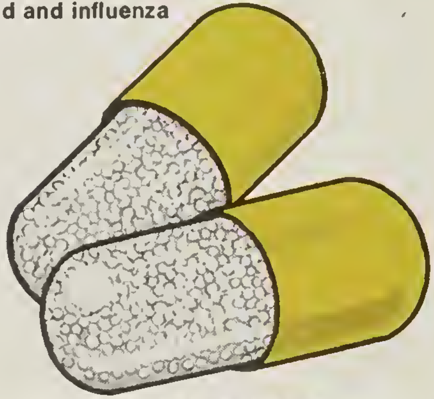
ISOCLOR loosens mucous plugs

ISOCLOR relieves runny eyes



ISOCLOR helps restore normal breathing

ISOCLOR promptly and effectively combats symptomatic miseries of the common cold and influenza



ISOCLOR helps patients face the cold facts

ISOCLOR®

soclor provides quick, long lasting relief of respiratory congestion and discomfort brought on by common colds, influenza, and allergies. Isoclor contains chlorpheniramine maleate — one of the most potent and safest antihistamines. And pseudoephedrine HCl — a decongestant bronchodilator providing effective and long lasting relief for the entire respiratory tract. Both work to extend the range of relief.

COMPOSITION: Each tablet or 2 teaspoonfuls of liquid contains:
Chlorpheniramine Maleate............................4 mg.
Pseudoephedrine HCl...............................25 mg.

Each ISOCLOR Timesule contains:

Chlorpheniramine Maleate............................10 mg.
Pseudoephedrine HCl...............................65 mg.
n a special pellet form providing both prompt and sustained effect.

NDICATIONS: For symptomatic relief of colds, hay fever, allergic conjunctivitis, perennial rhinitis of allergic origin and sinusitis. Opens nasal, sinus and bronchial passages orally.

CONTRAINDICATIONS: Sensitivity to antihistamines or sympathomimetic agents. Severe hypertension or severe cardiac disease.

PRECAUTIONS: Use with caution in patients suffering with hyperthyroidism. Patients susceptible to the soporific effects of chlorpheniramine should be warned against driving or operating machinery should drowsiness occur.

CAUTION: Federal law prohibits dispensing without prescription.

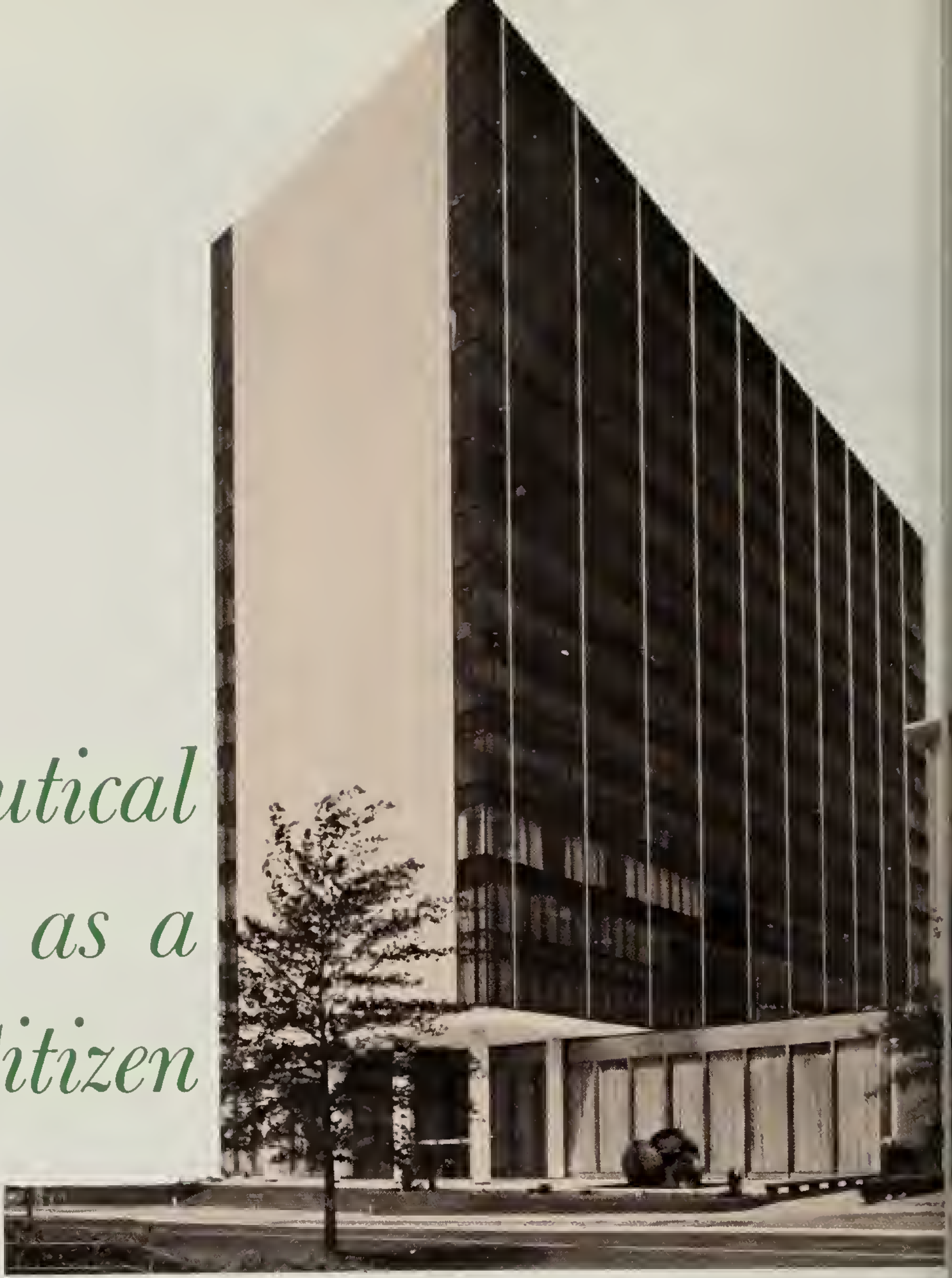
SUPPLIED: Tablets: Bottles of 100 and 1000. Liquid: 4 oz. bottles, pints, and gallons; Timesules: Bottles of 50, 250, and 1000.

DOSAGE AND ADMINISTRATION:	Tablets	Liquid	Timesule
Adults:	1 q. 4 h.	2 tsp. q. 3-4 h.	1 q. 12 h.
Children 6-12 years:		1 tsp. q. 3-4 h.	
40-50 pounds:		¾-1 tsp. q. 3-4 h.	
30-40 pounds:		½-¾ tsp. q. 3-4 h.	
20-30 pounds:		¼-½ tsp. q. 3-4 h.	
15-20 pounds:		⅛-¼ tsp. q. 3-4 h.	

ARNAR-STONE LABORATORIES, INC.
QUALITY—RESEARCH—SERVICE
SUBSIDIARY OF AMERICAN HOSPITAL SUPPLY CORPORATION
Mount Prospect, Illinois 60056

HOFFMAN-LA ROCHE, INC.

The Pharmaceutical Company as a Corporate Citizen



This fifteen-story *research tower, completed in 1965, dominates the large complex of modernistic buildings which serves as the headquarters of Hoffmann-La Roche Inc. in Nutley, N.J.*

As a member of the American health team, the pharmaceutical industry is basically different from most others. Like the physician and the nurse, the pharmaceutical company must have a conscience and it must place service above profits. The pharmaceutical company must have an abiding sense of civic and social obligation, reflected in its research, marketing, personnel policies and in its relations with the community.

Obviously, the pharmaceutical company, like any other industrial organization, must operate at a profit; the alternative is bankruptcy. But, unlike many other industries, the pharmaceutical company cannot focus on profit; instead, it must, first and foremost, consider its obligations to the patient, the medical profession, the community and the government.

Each company has to select its own approach to the practical realization of this corporate philosophy. At Hoffmann-La Roche Inc., the modern concept of enlightened corporate citizenship is reflected in its approach to all its activities.

Research

Roche research has made major contributions to modern therapeutics, including isoniazid (INH), Gantrisin® (sulfisoxazole), Gantanol® (sulfamethoxazole), Librium® (chlordiazepoxide HCl), Valium® (diazepam), Taractan® (chlorprothixene), Tigan® (trimethobenzamide HCl), Noludar® (methyprylon), Roniacol® (nicotinyl alcohol tartrate), Prostigmin® (neostigmine bromide), and Marplan® (isocarboxazid). Roche has also been a pioneer in the synthesis and large-scale production of vitamins, not only for medicinal use but for food and feed enrichment.

In contrast to most other industries which introduce new products only when there is a reasonable likelihood of a substantial market for them, Roche research has developed a number of so-called service items. While these products are therapeutically valuable, they are useful only in such rare indications as to preclude any commercial significance. However, as long as they may be of value even in isolated instances, Roche believes it has an inescapable obligation to market them. For example, Roche research developed Arfonad® for controlled hypotension; this drug is of value in lowering blood pressure during brain surgery. Roche research has also discovered a number of products useful in the diagnosis and treatment of myasthenia gravis, such as Tensilon® and Mestinon®. Similarly, Roche research has developed 5-fluorouracil for the symptomatic relief of certain inoperable malignant tumors.

Basic Research

While traditional research in the pharmaceutical industry is product-oriented, Roche believes it has an obligation to go beyond this approach. Just as Einstein's theory of relativity led to the development of the practical application of nuclear energy, it is only through advances in our understanding of basic biological functions that we can hope for major advances in therapeutics.

For this reason, Roche has created the Roche Institute of Molecular Biology which is dedicated to fundamental research in biochemistry, genetics, biophysics, and other aspects of molecular biology. This Institute is wholly devoted to long-range basic research designed to shed light on fundamental life processes.

The scientists at this institute enjoy independence in their choice of research problems, guided solely by the scientific importance of a project, regardless of potential significance. The institute combines the advantages of an academic environment, with its unlimited freedom of scientific inquiry and ability to publish, with the resources and services of a research-oriented major pharmaceutical company.

Members of the Roche Institute of Molecular Biology are encouraged to accept appointments at local universities and to participate in university teaching. Leading scientists from this country and abroad will be invited to spend a year or two at the institute, free to pursue research projects of unusual scientific importance. In addition, the institute also provides an opportunity for promising young scientists to obtain advanced training and to engage in fundamental research under conditions encouraging professional growth and creative effort.

The Roche Institute of Molecular Biology, located in a modern five story laboratory building now under construction, will eventually be staffed by approximately 200 scientists and ancillary personnel.

Parkinson's Disease

The civic-minded approach to research is illustrated by a major effort currently under way—the use of Levo-Dopa in Parkinson's disease. When preliminary reports showed that Levo-Dopa seemed of benefit in the symptomatic treatment of Parkinson's disease, the Roche research department initiated a major program to make this substance available in pure form in the huge amounts needed for treatment.

Since Levo-Dopa is a naturally occurring compound, it cannot be patented. However, its therapeutic promise is such as to justify a major effort for humanitarian reasons. Since it is estimated that there are approximately one million victims of Parkinson's disease in this country, Roche believes it has an obligation to develop an efficient method of producing this product in pure form. Preliminary findings indicate that in order to obtain optimal results, Levo-Dopa has to be administered in very large doses—up to eight grams a day. This is in contrast to most pharmaceutical products which are active in milligram doses. Moreover, it was shown that early preparations of Levo-Dopa contained substantial amounts of impurities. When a substance is taken in very large doses, like Levo-Dopa, purity is particularly important. For this reason, Roche research developed a new method of assuring unvarying purity.

The example of Levo-Dopa is typical of a little-known yet important aspect of the entire pharmaceutical industry. For example, when the Hong Kong flu threatened the United States in 1968, six major pharmaceutical companies initiated a crash program to produce a vaccine. At that time, it was not yet known whether the Hong Kong flu would assume epidemic proportions. Thus a major research and production effort of this nature may well result in a huge loss. However, the pharmaceutical industry has a moral obligation to make life-saving products available, regardless of the possibility of significant economic losses. This aspect of the economics of the pharmaceutical company is often overlooked by critics who focus their attention on a single successful product without realizing that the price of a successful product has to include substantial research, quality control, production and distribution costs of other drugs.

Roche Indigent Patient Program

The cost of drugs—part of the cost of all aspects of medical care, including physician's bills, hospitals, and others—can become a significant problem for patients of limited means. This is the reason for the Roche Indigent Patient Program. Just as physicians frequently contribute their services to indigent patients without charge, Roche believes it has an obligation to provide medication for them in the same manner. Started in 1962, the Roche Indigent Patient Program makes all Roche pharmaceutical products available without any charge to patients of physicians in private practice who need them but may find their cost an economic burden.

The physician himself implements the program. If he believes that a patient might benefit from a Roche drug whose cost would represent a hardship, he need only write to the company, stating the amount of the drug required together with a brief history. His request is filled promptly and without charge, red tape or means test. The company continues to provide the drug free of charge as long as the physician believes that his patient needs it.

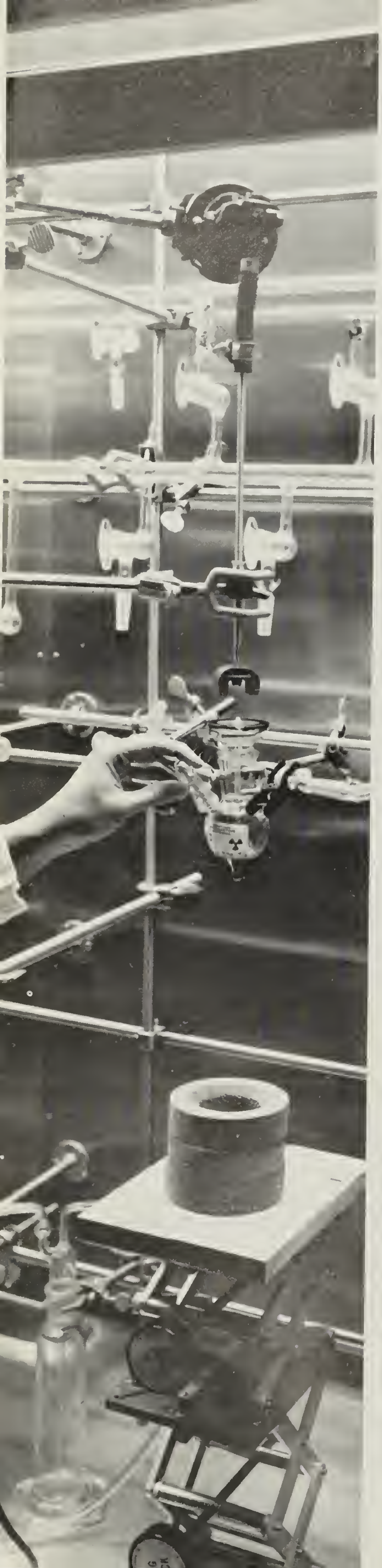
The Roche Indigent Patient Program not only assists needy individuals but it serves to strengthen the physician-patient relationship.

Work proceeds *on the Roche Institute of Molecular Biology at the Hoffman-La Roche Inc. complex in Nutley, N.J. The Institute is dedicated to fundamental research in biochemistry, genetics, biophysics and other areas of molecular biology.*

Nearing completion *at the Nutley, N.J., complex of Hoffman-La Roche Inc. is this nine-story research and quality control building.*

Roche Medicare Reimbursement Plan

Designed to ease the financial burden of Medicare to the public, the Roche



A Hoffman-La Roche *chemist employs an isotope tracer technique, which helps to determi the metabolism of a new drug.*

Medicare Reimbursement Plan covers all hospitalized patients who are Medicare beneficiaries. It provides for the reimbursement of 25 per cent of the cost of any Roche drug used by Medicare patients during their hospitalization. The company reimburses participating hospitals every three months.

This plan was developed in an effort to reduce the cost of Medicare to the government (and thus ultimately to the taxpayer), to discharge the civic responsibilities of the company, and to assist the medical profession in its efforts to provide the highest quality medical care for all patients, regardless of their economic status.

Employment Policies

An important part of a forward-looking approach to corporate citizenship is an enlightened employment policy. Roche has long provided equal employment and advancement opportunities for all applicants, regardless of race, color, or sex. But, in addition, Roche feels that a health industry has a special obligation to handicapped and to underprivileged members of the community.

For this reason, the company has developed a special employment program for handicapped individuals. Working in close cooperation with community organizations active in this field, Roche has a continuing program to restructure all jobs in the company so as to make them more suitable for handicapped employees. For example, clerical jobs have been restructured so as to eliminate the need for answering the telephone; in this way, deaf applicants can be given responsible and rewarding employment.

A major challenge to every civic-minded company is the employment of disadvantaged people. Roche conducts special nine-month training courses for underprivileged women from Newark designed to prepare them for clerical careers. In these courses, members of minority groups are taught typing, shorthand, business English, business arithmetic, operation of business machines, and other skills needed for modern office jobs. Students are offered

An important part of a forward-looking approach to corporate citizenship is an enlightened employment policy

An aerial view *of the Hoffmann-La Roche Inc. complex in Nutley, N.J. At the center is the fifteen-story research tower. In front of the research tower, from left to right, are a new* free bus transportation from the center of Newark to the Nutley offices of Hoffman-La Roche so that they obtain training in a modern business environment, providing maximum motivation. The company is also cooperating in a major training program for minority group members in the field of laboratory work. This technician training program is a full time program which provides training in modern laboratory methods which will lead to challenging and rewarding employment for underprivileged personnel.

Marketing

In the distribution of pharmaceutical products, the ordinary rules of marketing do not always apply. While the manufacturer of an ordinary consumer product limits his distribution to those areas where it can be profitable, the producer of a potentially life-saving product has a moral obligation to make it available wherever and whenever it may be needed, regardless of commercial potential. Similarly, in emergencies the pharmaceutical manufacturer has an obligation to rush his product to any place where it may be suddenly needed, regardless of cost. While such instances are rarely publicized, it is not unusual for emergency calls for a rarely used product to arrive late at night or during a weekend; in such emergencies the company rushes the product to the nearest airport and takes any step necessary to put it into the hands of the physician.

A chemist *synthesizes a new compound in a laboratory at Hoffmann-La Roche Inc. in Nutley, N.J.*

nine-story quality control and research building, the old administration building, and the new eight-story administration building completed in 1967.

Advertising

If an airline were to attach a warning to its tickets to the effect that planes may crash or that their flights may be delayed or cancelled due to bad weather, the impact on a potential traveler is easily imagined. By contrast, many pharmaceutical companies have long included in all of their information material a detailed description not only of the advantages and the proper use of the product but also its drawbacks and potential hazards. As a result, the physician can readily weigh the potential benefits against the potential harm. It is a scientific fact that practically any drug which has an effect on disease may also cause side effects. As a result, most pharmaceutical information material has long included a detailed review of potential hazards.

Quality Control

When the purchaser of a television set or a new home receives a substandard product, it will cause him expense, annoyance and inconvenience. But, basically, the damage can be remedied. Therefore the quality standards enforced in the production of widely used consumer goods are usually established in a way which balances the desirability of high quality against the cost of enforcing such quality. It is therefore anticipated that a certain number of consumers will receive a product suffering from defects which have to be corrected at considerable cost and inconvenience.

By contrast, pharmaceutical products must live up to the highest possible standards of quality, regardless of economic or production considerations. When human lives are at stake, only the best is good enough. There can be no compromise with quality. Consequently, the pharmaceutical manufacturer who is seriously concerned about his responsibilities devotes a far greater proportion of his budget and his scientific manpower to quality assurance than any other industry. At Hoffman-La Roche, for example, the quality control department consists of over 200 scientists and ancillary personnel, including a special research section which is concerned with the development of new and ever more dependable methods of quality control.

Russell Kohl, *who is diabetic, still puts in a day's work at age seventy-seven with the aid of Lilly Insulin. This picture shows him at work on his orchard farm near Newburgh, New York.*

The Thrice-boiled Turnips

Russell Kohl was slowly starving himself in a grim effort to hang on to life "a little longer."

Kohl's physician had promised him that, if he could stave off death from diabetes only a short time, a new treatment discovered by two University of Toronto scientists—Dr. Frederick G. Banting and Charles H. Best (later Dr. Best)—might save him.

In the year 1922 a starvation diet was the mainstay of the management of severe diabetes.

Kohl was then twenty-eight years old. Pale and emaciated, he had sunk from 155 pounds to a skin-and-bones 95. He was too weak to walk. But, encouraged by the tantalizing new hope that medical science held out to him, he had the will to live.

Hanging on to life was to test his courage and endurance. The doctor limited Kohl to a diet of less than 700 calories a day. He could have only a third of an ounce of carbohydrate.

In diabetes the eating of carbohydrates leads to the overproduction of sugar, which the body is unable to utilize for energy because too little or none of the pancreatic hormone insulin is available to facilitate this. Hence if Kohl, were to give in to his craving for food, he would die of an excess of sugar.

On Kohl's grim diet one does not live; one exists.

Kohl's wife, May, helped him to exist. Each day she would boil turnips for two hours, pour off the water, and boil them again. Once more the water was thrown away and the turnips boiled a third time. They were then suitable for his diet. They provided needed bulk without substance. Noncaloric wafers made from cellulose flour, agar-agar jelly (from seaweed) sweetened with saccharine, and black coffee also were on the unpalatable menu. May Kohl, who baked the wafers, called them "no-counts."

By adhering rigidly to his diet Kohl managed to remain alive. Weeks and then months passed while scientists in Toronto and at Eli Lilly and Company in Indianapolis worked day and night to develop a method for large-scale production of stable Insulin from beef pancreas extracts and to standardize it so it could be used effectively in diabetics. Unless this could be accomplished, Insulin therapy would be no more than a laboratory curiosity.

The scientists were aware that for many diabetics throughout the world this was a life-and-death race.

In the Lilly archives a clinical trial report relates how Kohl finally received Insulin and improved with it, how he was told he could have a full ounce of carbohydrates ("I was in heaven!"), and how at last he could eat whatever common sense and his pocketbook would allow.

Today, at seventy-seven, Kohl still works in the orchards on his fruit farm near Newburgh, New York. Although his activities are somewhat restricted since he suffered two light heart attacks in November, 1968, Kohl still puts in some time on a tractor, disking an orchard, or spraying trees. "The only difference is that I sleep a little later," he said. Lilly Insulin has preserved his health and vigor for more than forty-six years.

The discovery of Insulin therapy by the Canadian scientists and its development through the joint efforts of the University of Toronto and Eli Lilly and Company constituted one of the great landmarks in medical progress. The achievement ushered in a new era of research and development in the pharmaceutical industry. Collaboration and cooperation between academic institutions and the industry were greatly facilitated and increased. Industry was encouraged to devote more and more time, effort, and money to research, to the extent that in 1968 its research and development outlays reached $521 million.

For the Lilly Company, it was a turning point. Suddenly the company was widely recognized and its growth accelerated.

In 1923 Dr. Banting received the Nobel Prize in medicine for his discovery. He insisted on sharing it with his assistant, Best.

Over the years subsequent research in many laboratories has produced a number of improvements in Insulin preparations. These, however, have in no way dimmed the greatness of the original discovery.

As early as 1946 K. K. Chen, M.D., and his coworkers in the Lilly Research Laboratories reported on a sulfonamide derivative which would lower blood sugar in rabbits. The early sulfonamides, however, were too toxic for treatment of human diabetes.

In the middle 1950's German scientists discovered the usefulness of the much less toxic sulfonylurea compounds in mild diabetes.

A number of sulfonylureas were investigated extensively by Lilly scientists. After years of disappointment and expenditure without return, the Lilly program achieved success in 1964 with the introduction in this country of an oral preparation for the treatment of stable diabetes occurring in adults and not controlled by dietary regulation alone.

Thus, a disease recognized but impossible of treatment since the time of Aristotle now can be controlled by a number of medicinal agents which are available everywhere—and thrice-boiled turnips are no longer needed.

...at last!

A *neutral*
theophylline
derivative

DILOR® TABLETS
(dyphylline)

- less GI upset
- less CNS stimulation
- 1/5 as toxic as theophylline

DILOR® is the ideal bronchodilator for long-term use in asthma, emphysema, bronchitis, pneumonitis and related bronchopulmonary insufficiency conditions. DILOR® won't outwork theophylline, **but** gastrointestinal discomfort is virtually eliminated because of DILOR®'s neutral pH (6.5 to 7.3). **And** DILOR® is only ⅕ as toxic as theophylline or aminophylline. Causes less CNS stimulation, too. Bronchodilation is rapid and tolerance development is rare. DILOR® is also available in injectable and elixir formulations.

Send for **FREE** prepaid prescriptions for your patients

CONTENTS: Each blue tablet contains Dyphylline 200 mg.

INDICATIONS: Bronchodilation in emphysema, asthma, bronchitis and related bronchopulmonary insufficiency conditions.

DOSAGE: Usual adult dose is 1 tablet 3 or 4 times a day. Dosage may be increased up to a maximum of 2.4 grams per day when necessary.

PRECAUTIONS: Use with caution in the presence of acute cardiac disease, severe renal and hepatic disease, severe myocardial damage, hyperthyroidism and glaucoma. Combining with sympathomimetic drugs can cause excessive CNS stimulation. SIDE EFFECTS: High dosage for long periods may cause mild headache or slight nausea which can usually be controlled by dosage reduction.

CAUTION: Federal law prohibits dispensing without prescription.

SAVAGE LABORATORIES INC.
5222 ELM ST., HOUSTON, TEXAS 77036

GEIGY PHARMACEUTICALS

Geigy's Commitment to Cooperation in the Presentation of Medical Symposia

It's open season on today's physician for many neophytic writers who are covering the health care scene. In their inevitable comparison of the physician of today with yesteryear's "good old Doc," saleable copy seems to demand greater emphasis on "good old Doc's" charismatic qualities than on his ability to diagnose illness and to effectively treat patients. All the charisma in the world, however, can do little for the patient whose disease cannot be diagnosed and for whom an effective treatment program cannot be confidently instituted.

Today's physician is infinitely better prepared and qualified to treat today's or yesterday's patients. Much more is known about disease and illness and about the therapeutic modalities that are currently available.

As a matter of fact, the proliferation of modern medical knowledge continues at such a vertiginous pace that today's physician has to run twice as fast to even stand still. In postgraduate medical education today, it is not a question of whether the physician can afford to take advantage of such advanced training—it's more a question of whether he can afford not to.

Since 1961, Mr. Oscar Swarth of Geigy Pharmaceuticals has been charged with the responsibility of administering Geigy's educational grant-in-aid program and in lending whatever administrative help he could in scheduling of medical symposia. Geigy's involvement in this area of postgraduate medical education has increased to the extent that today administering the program requires the full time of at least four people.

Between 1961 and the present, Geigy has closely cooperated with many local medical societies in the presentation of some sixty-nine medical symposia. Physcian attendance at these symposia has reached a total of 35,900. A physician who chose to attend all sixty-nine of these symposia would have visited some twenty-nine states (including Hawaii) and the District of Columbia. He would have heard many of the nation's foremost authorities discuss such matters as: New Advances in Arthritis, Cancer and Athletic Injuries; Variants in Medical Responsibility—A Mock Trial; Colonic Polyps and Carcinoma of the Colon; Cardiovascular Disorders; Clinical Aspects of Learning Difficulties; The Adolescent in Turmoil; Mental Depression; Twentieth Century Violence and the Physician; Body, Mind and Psyche; Management of Emotional Problems; Stress; Critical Challenges in Cardiology and Psychiatry; Management of Cardiac and Inflammatory Disorders; Comprehensive Care of Children, and a host of other similarly topical medical matters.

Had this hypothetical, peripatetic physician been a general practitioner, he would have amassed a total of 278 hours Category 1 credit, as determined by the American Academy of General Practice Committee on Postgraduate Medical Education.

Perhaps today's physician doesn't have all the charismatic qualities of "good old Doc." It would be nice if he did. He has, however, something that is probably even more important and that is his hard-earned ability to diagnose illness and to effectively treat patients. Hard-earned because keeping abreast of developments in medicine is almost a full-time job in itself. Attendance at the symposia mentioned above is a prime example of today's physician's commitment to continuing medical education. Since virtually every one of these symposia was held on a Sunday, it's gratifying to note that almost 36,000 physicians have chosen to give up this day off in order to try to become even better informed and better qualified to treat the patients entrusted to their care. Geigy is proud of its role in the field of postgraduate medical education and looks forward to many more years of cooperating with local medical societies in the presentation of medical symposia.

LEDERLE LABORATORIES

The girl from GR

She's in marketing, too, her stock in trade being Company Image. Pennsylvania Medicine joins a group of doctors on a tour of Lederle Laboratories, guided by a trained escort from the company's Guest Relations Department

Lederle Laboratories offers professional advice and information to members of the medical and allied professions through the facilities and medical staff of its Medical Advisory Department.

The primary function of this group of physicians and other trained personnel is to inform, advise, comment and otherwise assist on all matters relevant to the use of Lederle products—research and development, pharmacology, indications, dosages, precautions, experimental uses, side effects, etc. The department can also assist, when feasible, in locating information on products and medical matters which are not necessarily directly related to Lederle drugs.

To meet the growing demand for these functions, department members write an annual average of 10,000 personal letters, fill an additional 10,000 requests for literature, and handle about 12,000 incoming and outgoing telephone calls.

Replies to inquiries are based on accepted reference material available in Lederle Laboratories' extensive main library, and in the department's special master file of over 3,000 cross-referenced subjects. Department members also call upon their varied backgrounds in private medical practice and other professional activities, together with their up-to-date familiarity with the medical literature and continuing attendance at professional meetings and postgraduate courses.

Whenever possible, individual letters of reply are accompanied by pertinent supporting data in the form of medical brochures, official circulars, abstracts,

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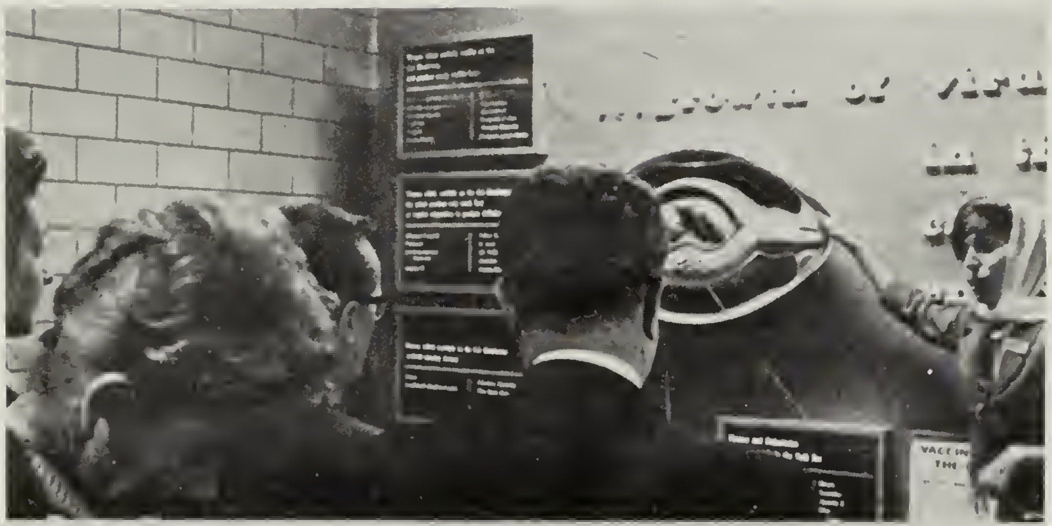

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reprints of published articles, and bibliographies.

The Medical Advisory Department may be contacted by letter or phone or through any *Lederle* medical representative.

Few indeed are the people who can be called "undisputed leaders of the medical profession." One such—who justifies the title at least five days a week—is the lithe, vivacious young lady pictured on page 73 leading a segment of the medical profession through the administration building of Lederle Laboratories in Pearl River, New York. The young lady, whose name is Linda Hoover, is one of the nine full-time tour escorts of Lederle's guest relations department.

Linda's charges, above, are a group of doctors—plus a number of wives—from the Canadian cities of Hull and Ottawa. The treatment they are about to receive is the equivalent of an intensive (five-hour) course in such subjects as pharmacology, mycology, serum production, polio research, encapsulation, and experimental therapeutics—all administered with equal parts of erudition and charm.

Although it's not the oldest in the industry, there is general agreement that the Lederle plant-tour program is a model operation. Word of this has obviously gotten around. Reservations for Lederle tours are, year in, year out, among the "hottest tickets" within forty-five minutes of Broadway, according to John Pfohl, head of Guest Relations.

The vast majority of visitors are from the medical and allied professions—residents, interns, medical students, hospital administrators, pharmacists and pharmacy students, as well as practicing physicians. Non-medical visitors include stockholders and people who live near the plant, the latter invited as part of the company's community relations effort.

Out-of-town guests are given the full VIP treatment by Lederle, including overnight accommodations and transportation to and from the plant—all on the house. For the benefit of foreign visitors, tours are offered in Spanish, French, German, Russian, Italian, Turkish, Arabic and Japanese: hence the multilingual tour escorts.

Should words fail one of the guides even in English, in the event of a tough technical question, a Lederle authority is sought out who can furnish the information. If none can be found during the tour, a written answer is sent later to the questioner's home.

Linda Hoover and her colleagues are rarely stumped, however, thanks to their thorough training and to on-the-job assistance of Lederle experts.

Lederle Laboratories launched its tour program in 1952 as an avowed sales-promotion effort, with John Pfohl (a former district sales manager) in charge. The objective was simple: to help move Lederle products by making friends with prescribers face to face.

From a marketing as well as a professional-relations point of view, the program has been a resounding success, and a measurable one. Most of the groups touring Lederle have been invited, and organized, by company representatives—detail men or district managers—who often travel to Pearl River with their guests. In many cases there has been a tangible, and sometimes dramatic, post-tour feedback back in the home territory. Upturns in sales and removals of detailing barriers have been directly traced to Lederle visits.

At the same time, an uncounted number of doctors' wives have come away from the plant with new respect for Creslan, Melmac and Formica—which the tour escorts take pains to point out as products of Lederle's parent company, American Cyanamid.

Small wonder that Lederle management has stated that the tour program would be "the last thing to go if we had to cut out all promotion."

VM. S. MERRELL COMPANY

NEXT WITNESS

One of a series of nine films on medical-legal subjects developed by Merrell for the health professions.

Next Witness was produced with the assistance of the legal and medical professions and cooperation of the American Medical Association and American Bar Association.

CPC *Merrell films*

to serve the medical professions

Merrell's challenging series of Clinico-Pathoogical Conference films.

A unique innovation in continuing medical education allows the practicing physician and medical student to match diagnostic skill with the film participants.

The films, designed to permit audience discussion, are actual case presentations filmed, unrehearsed, at important teaching hospitals.

Part I of the single reel films presents the case discussion and diagnosis. Part II reveals the findings at autopsy.

Each member of the viewing audience is provided a case protocol.

All medical and health profession films available from Merrell have been carefully researched for their educational value and produced with the assistance and cooperation of leading medical, hospital and legal experts. To obtain free loan of these educational films contact your Merrell representative.

CPC at the Philadelphia General Hospital

A 21-year-old male was admitted to the hospital with the chief complaint of shortness of breath. He had been in good health until seven weeks prior to admission when he developed a head cold with cough productive of yellow sputum and dyspnea on exertion.

Dyspnea became more severe; pedal edema was progressive. There was one episode of syncope following a climb of three flights of stairs.

Participants:
William Likoff, M.D. Allen J. Steinberg, M.D.
William E. Ehrich, M.D. George T. Wohl, M.D.

CPC at Cook County Hospital

A 25-year-old unemployed painter complained that his eyes were turning yellow. He denied loss of appetite and had no chills, fever, weight loss and did not complain of being itchy. On three previous admissions he had been jaundiced; twice before he had delirium tremens. His abdomen had increased in girth during the last three weeks and he had noticed swelling of the ankles during the last two weeks.

Participants: Steven O. Schwartz, M.D.
Paul B. Szanto, M.D. Hildegarde A. Schorsch, M.D.

No Margin For Error

No Margin for Error candidly presents case histories that deal with major causes of in-hospital liability actions such as mix-up in patient identification, error in medication dosage, and loss of sponge during surgery.

The film points the way for active, thoughtful cooperation between medical and administrative staffs of the hospital in attempting to avoid the uncommon human errors that are the major causes of in-hospital liability action.

CPC at Barnes Hospital Medical Center

The case is a 20-year-old male seen first at St. Louis Children's Hospital in 1957 at age 12 when he noted dizziness, substernal chest pain and nausea precipitated by physical exertion. The electro-cardiogram was interpreted as showing left bundle branch block, atrial enlargement and prolonged AV conduction. The case is followed to the final hospital admission at Barnes Hospital in 1964.

Moderator: Edward H. Reinhard, M.D.
Participants: Malcolm H. McGavran, M.D.
Neal S. Bricker, M.D. Robert Paine, M.D.
Erik Carlsson, M.D. Brent M. Parker, M.D.
David Goldring, M.D. Robert E. Shank, M.D.
Edward Massie, M.D. John R. Smith, M.D.

The Medical Witness

The Medical Witness is presented to help the physician make an effective transition from medical examining room to the courtroom. This transition can be made if—and only if—the special environment of a court of law is understood and appreciated. The film uses case examples to dramatize the right and wrong way to give medical testimony.

It gives special emphasis to proper preparation that can help the physician when he is called as a medical witness.

Rx for Maryanne

A film that portrays the vital function of the pharmaceutical industry . . . ideal for high school or college audiences, service clubs, and nursing, pharmacy or other medical groups. Produced in Canada for the prescription drug industry of North America, this color-sound motion picture is just 15 minutes long, so it fits well into any meeting.

The Doctor Defendant

The Doctor Defendant presents four examples of physicians involved in claims or suits. Illustrated are ways of avoiding professional liability action including proper record keeping, clarifying explanations to patients, written consent.

In addition, the film shows the value to the physician of a Professional Liability Committee in his local medical society.

An Ounce of Prevention

An Ounce of Prevention vividly portrays the many factors contributing to medication errors . . . illegible handwriting, confusing dosage forms, wrong route of administration, mathematical error and patient identification.

Through identification of the "5" rights of proper medication administration, the film shows the correct procedures followed by a majority of hospitals in ordering, dispensing, preparing and administering medications.

The Silent Witness

The Silent Witness shows how objective chemical tests for determining intoxication have been perfected for use by law enforcement officers, lawyers, and doctors. The film informs viewers of the latest test devices and their operation.

The award-winning film highlights the need for chemical tests, supported by expert medical testimony, in every community to establish courtroom proof of drunken driving. Only through the use of such tests can drinking drivers be brought to justice.

A Matter of Fact

In **A Matter of Fact** an innocent man is nearly indicted for murder as this dramatic story illustrates the necessity for alert and keen observation on the part of any doctor when establishing cause of death. The audience will learn to appreciate that the administration of justice depends, in part, on the man selected to investigate all unexpected deaths within the jurisdiction.

Whether the title of his office be coroner or medical examiner makes little difference. That the man who holds the office be qualified to perform its duties is essential.

The Man Who Didn't Walk

The Man Who Didn't Walk dramatizes one of the most controversial issues in the entire catalog of medicolegal problems . . . traumatic neurosis. The film portrays the case history of a man injured in an automobile accident. The fracture heals, yet he cannot walk. Traumatic neurosis . . . or malingering?

MERCK SHARP & DOHME

Professorships *made possible through postgraduate program lecture grants enable guest lecturers to visit medical schools to discuss questions of attending physicians.*

The Merck Sharp & Dohme POSTGRADUATE PROGRAM

"Divide your attention equally between books and men," advised Sir William Osler, the brilliant teacher-physician who greatly influenced the pattern of American medical education in the 1890's. Times have changed, but his admonition is as valid as ever.

Today, even the layman who regularly reads his daily newspaper knows that medicine is progressing rapidly on all fronts. Reports of lifesaving new surgical procedures, diagnostic techniques, medicines and knowledge of disease seem to hit the headlines as consistently as the news of crime and taxes. No practicing physician has to be reminded that keeping up with these medical advances is one of his greatest responsibilities as well as one of his biggest burdens. Pennsylvania Medicine itself is one important source of current information and documentation to the physicians of this state.

Helping to ease that burden is the purpose of the Merck Sharp & Dohme Postgraduate Program, established in 1959 to aid in supporting the continuing education of practicing physicians. In addition to helping physicians extend their knowledge, the program has aided in the recruitment of new members to the health team and it has promoted a better understanding between the physician and the public he serves.

Ralph E. Snyder, M.D., *Director of Professional Relations, Merck Sharp & Dohme, West Point, Pa.*

During the past nine years, the program has given an estimated 6,500 grants to hospitals, medical schools and medical associations to support lectures, courses, television programs, radio networks, films and loans to medical students, interns, residents and career projects.

Working with me and the professional relations department to carry out the program are the company's field representatives. The program is divided into seven distinct activities.

Postgraduate Lectures. From 1959 to 1968, the Postgraduate Program made 5,965 lecture grants that provided for 15,329 speakers in all fifty states. More than a million physicians have attended the lectures.

Also supported as part of the lecture program are visiting professorships at medical schools and their affiliated hospitals. These professorships enable guest lecturers to spend a day or so at a medical school discussing questions of the attending physicians and making rounds of the patient wards.

Since 1959, MSD has supported more than 100 professorships at medical schools throughout the country with an estimated attendance of nearly 25,800 physicians.

Reaching Rural America. The Postgraduate Program supports four kinds of regional postgraduate medical courses—classroom, university extension, two-way radio and television.

Classroom courses run between one and five days and concentrate on one organ system or disease. The extension courses are designed to reach doctors in rural areas who can't conveniently travel to medical centers.

During the past nine years, MSD made 366 grants for classroom and extension courses with a total attendance of 2,486,000 doctors.

Particularly valuable in reaching rural physicians have been two-way radio conferences and television lectures that link each "listening post" with the central transmitter and provide a question-and-answer situation between the lecturer and his audience. One guest speaker gave a TV lecture from his home in Cleveland, Ohio and reached 175

Continued educational *development of interns and residents is supported through the postgraduate program by the George W. Merck Memorial Loan Funds.*

steopaths in Maine—all but two of the steopaths in the state.

Film Showings—Physicians and Public.)ver the years, MSD's film library has ffered both clinical films that are used s teaching aids for medical audiences nd general health education films made n cooperation with medical societies for howing to the public. Currently, the atalog is made up almost entirely of lay ilms, such as *A Place To Get Well*, deigned to alleviate children's fears of a ospital environment, and *Medical Care or Adolescents*, which illustrates the special ealth problems of adolescents. One echnical film available is *Laser and iving Cells*, which shows the effect of aser beams on cells. Last year, MSD ilms were distributed nationwide for ,930 showings to estimated audiences of early 181,000 people.

Help for Residents and Interns. Estabished in 1959 by The Merck Company 'oundation, George W. Merck Menorial Loans are awarded to interns and esidents from twenty-nine medical chools. By the end of 1968, more than 600,000 had been loaned to some 1,000 nterns and residents.

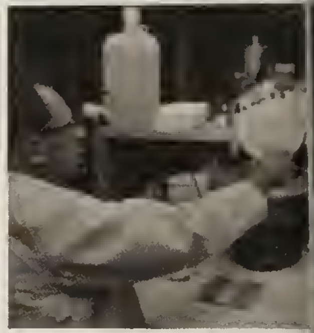
AMA Loan Guarantee Program. MSD vas the first contributor from private ndustry—and is still the largest single ontributor—to this plan, which is dministered by the American Medical Association and provides loans to medical tudents, interns and residents. MSD gave $100,000 when the AMA founded the program in 1962, and since then has contributed an additional $400,000, bringing total support to $500,000. Since the program started, the AMA has given 38,908 loans totaling $42,967,000 to help future physicians through medical school.

Medical Career Projects. To encourage young men and women to follow careers in medicine, the Postgraduate Program contributes to the certifying program of the American Association of Medical Assistants, and the "Medical Career Program" of the Student American Medical Association. MSD is the sole support of *Pre-Med*, a national magazine produced at Columbia University three times a year and distributed to premedical students all over the country through their faculty advisors.

Management. The company has conducted more than twenty office management seminars that are designed to familiarize new doctors with the business side of medicine, a subject not in medical school curriculums. Among the subjects discussed in the seminars are business management, personnel selection and training, billing and collection systems, record keeping, income tax and estate problems. Merck Sharp & Dohme cosponsors the seminars with county and state medical societies.

Classroom *postgraduate medical courses, which usually concentrate on one organ system or disease, are designed to reach doctors in rural areas who would have difficulty traveling to medical centers.*

There is nothing so powerful in all the world as an idea whose time h
come . . . VICTOR HUGO



The Story of ORTHO PHARMACEUTICAL CORPORATION

Behind the story or Ortho Pharmaceutical Corporation is a dedication to one fundamental idea about human existence:

Every baby born has the inalienable right to be wanted; to be loved, protected, and well cared for; to inherit a rightful share of a world offering not just sustenance, but beauty and opportunity for self-fulfillment.

Incontestable as it may seem today, the ripening of this idea—and Ortho Pharmaceutical Corporation—did not come until the 1930's.

A group of prominent obstetricians and gynecologists approached Johnson & Johnson back in 1927. They suggested that for families wishing to space their children safely and effectively, the company develop a contraceptive jelly that the medical profession could prescribe with confidence. At that time, there were no ethically approved means for women to plan childbearing.

The deliberations that grew out of this committee's suggestion resulted in research work producing ORTHO-GYNOL Vaginal Jelly. That was in 1931, and by 1936 the product acceptance was sufficient to warrant the creation of an ORTHO-GYNOL Division of Johnson & Johnson.

Shortly afterward, the discovery of the sulfa drugs and antibiotics began to enable medical science to make dramatic reductions in the global death rate. New germ killers, vaccines, better hygiene, pest controls—all were helping more people live longer and healthier lives. Worldwide population growth was starting to dangerously outstrip our food supply, our arable land, pure water, clean air, living space, educational facilities, jobs—the things that make life possible and worthwhile. Now birth control needed to be elevated once and for all from the level of superstition to that of science.

In the spring of 1939 a telephone call went from the J&J home offices in New Brunswick to Boston, Massachusetts.

eneral Johnson, who earlier had recog-ized a need for the pharmaceutical idustry to provide better methods of irth control, thought that the time had ome to expand the ORTHO-GYNOL ivision. What evolved was the blue-rint for a new venture that would con-entrate on the field of human fertility; hat would study all phases of this prob-m, including contraception, the cor-ection of infertility, and pharmaceuti-als for treating gynecological disorders.

By January of 1940, Ortho Products, nc., was formed. The business began in inden, New Jersey, about sixteen miles ortheast of New Brunswick. In a one-ory brick building rented from a utility ompany, eight persons were employed o turn out one product in one package rom one machine.

Ortho representatives calling on the nedical profession to discuss products for irth control were not always cordially velcomed at that time. "Public opinion nd the law were not completely friendly n the early days."

In fact, many physicians wanted to ave absolutely nothing to do with pre-cribing contraception. Many states estricted birth control products or in-ormation, and sometimes these laws ould be enforced rather severely—in ome places, a salesman or a pharmacist vho displayed or sold contraceptive roducts even ran the risk of arrest.

As the Associated Press recently stated: 'Remember Billy Mitchell? His activi-ies got him arrested and court-martialed one day, but eventually the importance of his ideas and his work were recognized in the very highest places. That's about the way it's been with Ortho."

In recent years, of course, family planning has changed from a minor to a major aspect of the doctor's practice. Where before, physicians may have been reluctant to discuss contraception with a pharmaceutical representative, now they are highly desirous of getting the latest word on the subject, the advantages of the various methods, and information on new developments that may be in the offing.

Today's Ortho man is not only welcomed, he is sought out for news about progress in the family-planning field. Company representatives are invited to discuss the population problem, and the need for control, before large community audiences of various types—one man has spoken before some 40,000 persons.

From its very inception, Ortho recognized a basic obligation to pioneer in the search for answers to complex problems that were then at the outer frontiers of scientific knowledge. Originally a small research group was formed in Linden to improve our understanding of the human reproductive process so as to provide safer and more effective methods by which we might control our most precious resource—people.

In 1944 the Ortho Research Foundation, with a nucleus of twenty-five people, was created. From its pharmaceutical investigations during the quarter-century since, have come numerous and significant contributions to the science of gynecic medicine; some of the leading formulations for conception control; and one of the world's most frequently prescribed contraceptives, the ORTHO-NOVUM tablet.

Much of the progress toward safe and effective methods of vaginal contraception was accomplished by the late Dr. Carl G. Hartman. "Dr. Carl" made discoveries in reproductive physiology that helped establish the basic principles of modern birth control. He received the first Margaret Sanger Award in Medicine in 1966 and in 1967 was cited personally by President Johnson for his role in developing reliable ways to control conception.

The year that Dr. Hartman joined Ortho—1947—was a noteworthy one in other ways as well: Ortho Products became Ortho Pharmaceutical Corporation, and the firm left Linden.

Four top operators from the Linden plant formed the nucleus of the new packaging force in Raritan. The research scientists were happy to forsake the loft they had occupied for handsomely equipped laboratories more than four times larger.

The continuing quality of research done in those laboratories has been illustrated by the fact that three of the company's scientists have received the Johnson Medal for Research and Development in recognition of superior achievements.

Pharmaceutical research at Ortho has over the years disclosed many basic truths concerning reproduction and has led to a number of powerful new weapons for the physician. Quite early it was understood that no one method of conception control would be equally acceptable to all women, and so ORTHO-GYNOL was followed by a variety of other spermicidal preparations, diaphragms, intrauterine devices and oral contraceptives, until today the company is the only one offering women every medically approved method to space their offspring.

In 1943 the American Medical Association's Council on Pharmacy and Chemistry granted its seal of approval to the Ortho line of products. In fact, the company was praised in the association's journal for "one of the best presentations ever submitted to the Council."

The marketplace has become increasingly competitive over the past five years. According to a recent count, more than forty oral contraceptives are being sold around the world by more than two dozen companies in at least eighty countries.

"In recruiting, we look for the man with a sense of purpose, the man who feels in his bones that population control is an absolute necessity," says an Ortho officer. "To do the best job, he must have a kind of missionary zeal."

Once hired, every sales representative is intensively trained for maximum efficiency. His initial training lasts four weeks, of which thirty hours are spent on a programmed instruction course called "Methods of Conception Control."

Containing a wealth of information on female physiology in over 200 panel frames, this unique course was developed by Ortho's medical affairs division and has won wide use among medical faculties across the country. The majority of our future physicians now use the program in their study of family-planning methods, and it is also used as a reference by health workers abroad.

Many of the materials Ortho uses in the education of company representatives are also offered to help professionals broaden their knowledge of anatomy, physiology and reproduction. Ortho films, for example, are available without charge to medical, pharmaceutical, dental, veterinary and nursing schools; hospitals, physicians, medical societies, clinics, public health and welfare agencies, and allied professional groups.

One prize-winning film, *Modern Obstetrics: Normal Delivery*, was produced with the aid of a committee named by the American Medical Association and the American College of Obstetricians & Gynecologists.

The hard work of the committee was recognized when the film was selected from among over 500 others to receive a Golden Eagle Award from the Council of International Nontheatrical Events. Designed to demonstrate proper care of the average obstetric patient and her baby, this first teaching film on normal childbirth produced in a generation was praised by the American Medical Association as a "major step in the progress and advancement of obstetrics and gynecology."

Another important Ortho film, *Confidence by Choice*, deals with current, medically accepted methods of conception control. The oral contraceptive method is fully discussed with the aid of a basic animated section on endocrinology. *Vaginitis* deals with the four major types of this infection. Current methods of treatment are outlined and the value of each method is discussed.

To encourage professional attainment, and to recognize it, the company gives a number of special prizes, grants and awards.

Since 1956, teachers at more than twenty-five medical colleges around the country have received grants to stimulate medical education in ways that will most benefit the students, interns and residents in obstetrics and gynecology.

Annually the American Fertility Society chooses a promising young resident in obstetrics and gynecology to receive the Carl G. Hartman Grant-in-Aid Award to meet the expense of attending scientific meetings or visiting research centers. And for a decade the Ortho Medal Award has been given in honor of distinguished scientific contribution to the field of reproduction. The medal and honorarium are awarded to individuals doing outstanding laboratory or clinical investigation.

It's a very long distance from Raritan to Rwanda or Reykjavik. But to a world steadily shrinking in size while growing in numbers, Ortho speaks a multitude of languages.

In whatever tongue, the company's name has come to stand for improvement of female health wherever there is an appreciation of the wisdom of family planning or the need for better gynecic medicine. Bespeaking Ortho's service to health are more than 2,500 trademark registrations in over 100 nations of the free world, where 1½ *billion* people live.

It can be said that almost every product sold by Ortho in the United States is now available overseas. In some cases, these products are changed in packaging, even in name, to meet local conditions. Promotional literature, brochures, reprints, charts and even medical films are available in national languages.

As in the United States, Ortho products are promoted abroad on an ethical basis—through the medical profession and not directly to consumers. In some countries, particularly the developing nations, governmental buying to provide for large-scale medical needs, as for family-planning programs, represents a substantial segment of the business. Although similarities exist among markets, each country must be carefully studied to determine how to conduct the most effective business. A prime requirement is to find an aggressive, well-respected distributor and then maintain good relations with him.

A man who lives thousands of miles from the U.S. must nevertheless be given a feeling of belonging to the Ortho team. He must understand and agree with company policies, gain product knowledge and know how to apply this knowledge to increase the use of Ortho products in his territory—know his area intimately in terms of today's market and be ready to serve tomorrow's.

For Ortho, gain or loss depends almost entirely upon the efforts of the local representative. His approach must bespeak quality, integrity, and competence.

To help solve the desperate population problems of lesser-developed countries such as India, for example, Ortho foregoes customary royalties so that intrauterine devices can be distributed at minimum cost. Already, nations like Korea have been helped in lowering their birth rates considerably.

Just as Ortho representatives travel overseas to study, and assist in meeting, the health needs of other peoples, Raritan also receives numerous visitors from other nations—many of them physicians —who come to look and to learn. The flag of their home countries flying atop the Ortho plant proudly announces that the company is playing host to guests from abroad. Many such visits mark the beginning of long and friendly associations.

Every day, in foreign countries around the world, hundreds of Ortho professional men call on physicians, pharmacists, clinicians and other health workers. Roughly equal to the number of representatives in the United States, they, too, work with medical professions in helping families plan healthier, happier lives.

Just as the miracle drugs have enabled mankind to gain a *longer* life, so do the principles of family planning and gynecic pharmaceuticals to which Ortho is committed offer a *better* life. This is the promise that Ortho Pharmaceutical Corporation makes to future generations at home and abroad.

Great Moments in Medicine

PARKE-DAVIS

ART AND HISTORY are said to be the most powerful instruments of our inquiry into human nature.

The combination of these two cultural elements has produced *Great Moments In Medicine*, a project recently completed by Parke, Davis & Company. Interesting historical stories and warm, human, almost three-dimensional paintings have been combined in *Great Moments In Medicine*. It is one of the most comprehensive graphic presentations ever employed to portray the background and significance of a profession: medicine.

The project is unique in many ways. First, in scope. The brief but accurate stories cover highlights of medicine's progress from the dawn of history, some 5,000 years ago, up to the present day. Each story is illustrated with an original oil painting that conveys a powerful insight into the time and the people who took part in bringing about an important forward step in medicine. There are forty-five stories and paintings.

An author-artist team performed this monumental task for Parke-Davis. George A. Bender, a Parke-Davis executive, directed the project and wrote the historical stories, which average some 3,000 words each. Artist Robert A. Thom painted each of the large, colorful oils. Together, the author-artist team spent ten years of time and some 250,000 miles of travel in gathering facts and doing research for the series. The project was completed in 1964.

There have been many illustrated histories of medicine—but none has been illustrated with completely new and original paintings. By breaking away from the time-worn illustrations left by the accidents of history, the paintings in this series have a freshness and brilliance about them that is appealing. Furthermore, despite the varying art forms popular at various periods, the paintings in *Great Moments In Medicine* present people as people, in whatever age or setting they may have lived. Thus, they bring an aura of living reality to scenes and events that may have occurred centuries ago.

It is unique, too, to find a great pharmaceutical manufacturer sponsoring a cultural project such as this. Parke-Davis took a position of leadership in so doing. A number of corporations, in recent years, have made possible art and literary projects, though none approach the scope and depth achieved in *Great Moments In Medicine*. As the church served as art's patron in medieval times, the courts and nobility during the Renaissance, and wealthy families during the dawn of the industrial era, the great corporations are recognizing their responsibility to the public and are supporting cultural advances today.

Basic advisor to Bender and Thom with reference to the series on the history of medicine was Dr. Erwin H. Ackerknecht, professor and director of the Institute of the History of Medicine and Biology at the University of Zurich, Switzerland. Dr. Ackerknecht, who is recognized as one of the world's leading medical historians, provided assistance in selection of subjects, guidance as to sources of information, existence of places where events took place, and individuals who were particularly well informed about specific subjects. Search for these objectives took the research team into eighteen countries.

To provide background for the stories and paintings, it was necessary for the author and artist to do several things:

First, go to the most logical place to look for material;

Become detectives to discover whether any artifacts of value were to be found at the place; or whether persons having specialized knowledge of the incidents could be reached;

Frequently it was necessary to go to several places—sometimes to other countries—to supplement the material needed;

Photographs, both colored and black and white, and sketches, were made whenever possible of artifacts, furniture, apparatus, architectural detail, and costumes, from every conceivable angle;

Whenever feasible, pencil sketches of possible compositions were rendered while on the spot, so that they might be checked with expert advisors and errors eliminated during person-to-person conversations;

Extensive notes were made relative to these facts and materials, and particular care was taken to get names, titles, names of institutions, and mailing addresses correctly recorded for future reference.

Stories, like the paintings, had to be carefully researched, and submitted to experts in several countries for criticism and correction, before final drafts were approved for publication.

Whenever possible during these trips, conferences were held with Dr. Ackerknecht, to evaluate the facts and advice which had been accumulated, to resolve conflicts of information, and to sift out irrelevant material.

After each of these trips Mr. Bender and Mr. Thom returned to Detroit to prepare stories and to paint illustrations. Most of Mr. Thom's paintings were made in a pleasant two-story studio attached to his home in Birmingham, Michigan. Mr. Bender's work was done both in his office and in his home, where he has a reference library of several hundred volumes.

Mr. Thom and Mr. Bender worked closely together in planning compositions that would best convey the story of the event. The artist, of course, was restricted to one situation, while the author had more flexibility. On the other hand, Mr. Thom developed a remarkable ability to achieve realism. He had a knack for being able to do portraiture of persons of all ages, ethnic types, and periods of time. He had the patience and ability to recreate, in minute detail, architecture, furniture, costumes, and artifacts. He was able to present a visualization of the situation in striking realism and with a naturalness which almost makes his subjects seem to live and breathe. One of the subtleties of his style is the ability to achieve a tremendous three-dimensional feeling in his paintings. He also painted in detail to the very edge of the canvas so that the viewer has the illusion of standing in the same room, or of looking through a window, at the scene. To use Mr. Thom's words, he paints from "back to front—applying the heavy areas first and laying detail upon them, and finally placing the human subjects in their perspectives."

In preparation for the stories, Mr. Bender had to learn intimate details of the lives and events he sought to portray. Often, he began to feel as if he really knew the characters—as if he were writing about a friend. In one instance, this became literally true. Both Mr. Bender and Mr. Thom became good friends with Dr. Charles Best, of insulin fame. The great Canadian physician and scientist was the only one of their subjects whom time permitted them to interview personally.

One of the baffling problems concerning historical research is that things are not always found where it would seem they should be. One example is that of the painting of Lavoisier. All of Lavoisier's work was done in Paris—but there was little physical material left pertaining to him that could be discovered in Paris except portraiture. The background reference for the Lavoisier painting was found in the Deutches Museum in Munich, Germany. Apparatus was reconstructed on the canvas from rather sketchy drawings made by Madame Lavoisier in connection with notes she wrote for her husband during laboratory experiments.

This same German Museum was the source of background reference for the painting of Paracelsus. The research team studied Paracelsus intensively in Basel, Switzerland, where the medical mystic lived for more than a year, and where there is a very active group of historians whose hobby is the study of Paracelsus. Mr. Thom and Mr. Bender considered a number of compositional ideas, but finally surrounded the ill-tempered medical scientist with an alchemist's "kitchen," such as he constructed whenever he stayed in one place for a sufficient length of time. Mr. Thom's painting caught the highly controversial, acid personality of this great rebel of medieval medicine. Note how Paracelsus' eyes seem to follow you, wherever you stand. In his story, Mr. Bender was able to enlarge on the complex personality, and to point out the constructive contributions Paracelsus made to medicine, despite his mysticism and glaring faults.

While art and historical research took the team to most of the centers of learning in Europe, not a few problems confronted them right here in the United States. One of these was associated with the painting of the first meeting of The American Medical Association. This organization had its beginning in 1847 at a meeting in the Academy of Natural Sciences of Philadelphia. Mr. Thom was confronted with two necessary, but relatively uninteresting, elements—a sea of faces, representing the 250 delegates present; and highly utilitarian but unimaginative architecture. The building is gone, but the room was reproduced from architectural drawings and photographs.

In the foreground of the picture, Mr. Thom contemplated portraits of fourteen of the prominent physicians who were present and took part in the organization meeting. This in itself necessitated a great deal of research and travel, for the men came from a number of states. Frequently, available portraits had to be reconstructed from an age standpoint, dropping perhaps ten or twenty years from the faces of the men as compared to dates of available portraits.

To relieve the rather stark basic elements of the painting, Mr. Thom sought some device as a counterfoil. The academy had the skeleton of a duck-billed dinosaur on prominent display. Mr. Thom inquired two or three times whether it would be suitable to incorporate the dinosaur into the painting, as a means of providing curvilinear relief. Those with whom he talked assured him that this would be quite all right; and the dinosaur was painted into the picture. The painting was then checked with Dr. Ackerknecht and with The American Medical Association, from whom it received approval. A photograph of the painting also had been sent to the Director of the Academy of Natural Sciences. Due to staff vacations, it was not until the painting was ready to go into production for printing that Mr. Bender received a highly agitated letter from the director of the academy. The director apologetically said that he did not know what the solution to the problem would be—but that the painting could not possibly be reproduced as it was. Someone had discovered that the dinosaur skeleton had not been dug up until ten years after The American Medical Association meeting!

Mr. Thom had all reservations made for another six week research trip in Europe. There was nothing to do at the moment but to pull the American Medical Association painting out of production and substitute the next one in line. This provided Mr. Bender with a king-size problem—he had not begun to write about the following subject, Virchow. However, he was able to rush through a suitable story in a two week period—something of a record for a historical article that must stand scrutiny of critical readers around the world. By the time the color separations had been made, the Virchow story caught up with the illustration, and the production schedule was not delayed.

Upon his return from Europe, some weeks later, Mr. Thom again visited the academy, asking the question, "What *did* you have in 1847?" It was determined that at that time the museum had a skeleton of a mastodon on display. "Where," Mr. Thom asked, "is the mastodon skeleton?" He was informed it had long since been disarticulated and packed away. The artist's next question was, "Who has a skeleton of a similar species?"

"We think there is one at Rutgers University."

Mr. Thom then journeyed to Rutgers and found that they indeed did have a skeleton of such a mastodon. He photographed it very carefully, returned to his studio and replaced the painting on his easel. Then came a very perplexing problem: how would he replace the relatively delicate bones of the dinosaur, standing on its hind legs, with the very heavy bones of the mastodon? The task was accomplished by using the mastodon's front legs in place of the dinosaur's hind legs, and painting the massive bones of neck, head and tusks of the animal curving out over the heads of the assembled delegates. All this Mr. Thom was able to do with the loss of but one of the fourteen portraits! Finally the painting was again ready for checking. This time everyone was happy—the academy, The American Medical Association, and Dr. Ackerknecht. It went into production with the next group of pictures to be reproduced.

Behind each of the forty-five subjects there lies many a story—a story of remarkable, resourceful, painstaking detective work, leading sometimes to discouraging disappointments. A story of sometimes heart-breaking revisions necessitated because of preliminary misinformation or lack of information. Or a story of final triumph when all of the facts and artifacts could be drawn together, perhaps from sources in half a dozen countries, with the touch of the artist's brush and of the writer's pencil.

Only two restrictions were placed on the artist with reference to execution of the commission: First, regardless of size, the paintings must maintain a steady proportion of 3:4 so that they would all reduce to a standard size for reproduction; and second, that the basic painting should not be too large to get through the door of a taxicab! Beyond this, the artist had freedom of action, media, and composition, so long as the historical facts were truly portrayed. Most of the paintings were done on traditional canvas, which was then backed by mounting on masonite to protect the paintings while being handled and while traveling on exhibition. However, Mr. Thom experimented, from time to time, with other media, such as canvas board, and both the smooth and rough side of masonite. Almost inevitably, the artist would return to canvas.

The History of Medicine paintings first were reproduced in six colors of ink for Parke-Davis' publication, *Therapeutic Notes*, which, in its several editions, circulated to some 400,000 physicians around the world. Next they were reproduced in the form of art prints suitable for framing. On occasion, some of the paintings were reproduced in the form of window displays. Also, a number of them have been used in Parke-Davis institutional advertising and appeared in this form in sixty-two countries, together with copy in eight languages. In smaller print form they have circulated to students, teachers, and other persons interested in history, art, and education.

Requests for the prints for reference purposes have come not only from members of the health professions, educational institutions and schools of art, but from schools of architecture, of the dance, of costume, and from hospitals and institutions of all types. The prints are to be found virtually in every country around the world; and they have been extensively used as background and reference material by companies making moving pictures and television films. Reproductions have appeared extensively in encyclopedias, text books, and specialized reference works. The original oil paintings, valued at more than a million dollars, have been widely exhibited across the country in public museums, art galleries, and at educational institutions.

Great Moments In Medicine was preceded by another similar Parke-Davis project, *Great Moments In Pharmacy*, which was created by the same author-artist team of Bender and Thom. There are forty stories and forty original oil paintings in this series, which also required a decade of research, writing, and painting.

Sandoz and the Medical Profession

Sandoz Pharmaceuticals considers its primary function to be the improvement of the condition of human life.

It recognizes that it cannot prosper, or continue to prosper, unless the drugs which it develops and makes available to the medical profession relieve pain and suffering and prolong life or make it more endurable.

This concept of the function and responsibility of a pharmaceutical manufacturer is comparable with the standards which guide and inspire members of the medical profession. Sandoz proudly accepts identification with the medical profession and sponsors a number of postgraduate medical projects solely for the purpose of aiding the physician in the fulfillment of his function.

As part of what it conceives to be its responsibility to the medical profession, Sandoz Pharmaceuticals has established bonds which tie it to the individual physician.

Two of these are publications:

Sandoz Panorama, a thirty-two page, informative journal, in which eminent specialists write on their branches of medicine for an audience of more than 100,000 who are, mainly, family physicians, general practitioners, internists, and pediatricians.

Psychiatric Spectator, a newsletter which reports significant events of interest to psychiatrists and neurologists.

A constantly increasing number—thirty-five at last count—of motion pictures on a variety of subjects, with some emphasis on psychiatry. Titles range from "World of the Schizophrenic" to "Treatment of the Sub-normal in New Zealand." One film, "Concerto Mechanique," is designed to give medical audiences a subjective understanding of schizophrenia that words alone could not convey. There is no dialogue, and the message is transmitted through symbolic music and the behavior of man and machine in confrontation.

Still another service which Sandoz Pharmaceuticals performs for the medical profession is sponsorship annually of a series of lectures, the Sandoz Postgraduate Medical Lecture Program. Cosponsors in this project are the neighboring Essex and Morris County, N.J., Medical Societies, but Sandoz assumes all responsibility for recruiting the faculty and staging the lectures. Lecturers are most often drawn from medical colleges in the northeastern seaboard area, but have included specialists from the West Coast. Like the *Panorama* articles, the lectures are designed mainly to acquaint family physicians with the newest, most sophisticated concepts and methods of the specialties.

In effect, this lecture service anticipated the recent action of the AMA in establishing a Board of Family Practice to certify physicians who earn 300 hours of postgraduate education credits or serve a three-year residency in the six years preceding examination. This reform, long sought by the American Academy of General Practice, has as its goal the upgrading and modernization of family practice. With the same aims in mind, the Sandoz Postgraduate Medical Lectures have been, from the beginning, accredited by the AAGP.

A Pavilion to Learning

On May 16, 1969, the $7.7 million Robert Wood Johnson Pavilion was dedicated at the University of Pennsylvania to provide the School of Medicine with expanded library facilities as well as additional teaching and research space.

The six-story structure is named for General Robert Wood Johnson, son of the founder of Johnson & Johnson, chairman of the board for twenty-five years and chairman of the company's finance committee at the time of his death in 1968. A gift of $1.5 million from the Johnson & Johnson Associated Industries Fund provided the decisive portion of the construction funds for the building. The general laid the cornerstone for the pavilion in July of 1967.

General Robert Wood Johnson, Son of the Founder, of Johnson & Johnson

The library of the Robert Wood Johnson Pavilion will house about 125,000 volumes, with a seating capacity for more than 300 readers. In addition to the library, the first floor of the building has typing rooms, small rooms for faculty study, a rare-book room, a service area with duplicating and microfilm equipment, and space for future installation of technological innovations. Also located on the first floor are eight teaching laboratories, each for twenty students.

The upper floors of the new medical teaching and research facility will house the department of microbiology and research laboratories for microbiology and a number of clinical departments, including internal medicine, neurology, research medicine and ophthalmology.

Dr. Alfred Gellhorn, dean of the School of Medicine, in his remarks at the dedication ceremony, emphasized the necessity of research in the growth of medicine and declared that the work to be done in the new Robert Wood Johnson Pavilion "will push back the frontiers of medicine."

Speaking on behalf of Johnson & Johnson at the dedication, Philip B. Hofmann, chairman of the board and chief executive officer since 1963, said, in part, "General Johnson believed that medicine must be free and unfettered . . . and we must support researchers in these efforts."

Although Robert Wood Johnson did not live to see the building that represents still another step in the Univerity of Pennsylvania's overall planning for its medical center, the long-established and farsighted credo by which he directed the growth of Johnson & Johnson in industry and citizenship was very much in evidence.

It was almost thirty years ago that General Johnson wrote, "We build not only structures in which men and women of the future will work, but also the pattern of society in which they will work. We are building not only frameworks of stone and steel, but frameworks of ideas and ideals."

SMITH KLINE & FRENCH

On Ethics And Films

Dr. I. S. Ravdin, *former head of the Department of Surgery of the University of Pennsylvania's School of Medicine, excises a tumor in the operating room of University Hospital in the early days of Smith Kline & French's Medical Color Television program. The camera shown televising this procedure was developed for SK&F by the Engineering and Research Laboratories of the Columbia Broadcasting System and was used in the first non-experimental color telecast in history on June 6, 1949. The camera was donated to the Smithsonian Institution in Washington, D.C. by SK&F on July 30, 1969.*

When a small group of medical students returned gifts to drug companies early last year because they felt the industry was "trying to buy" them, the story made headlines in the *Wall Street Journal.*

More headlines were made this spring at the Student American Medical Association meeting in Chicago when dissident SAMA members challenged drug companies to redirect advertising and promotion monies to welfare causes by supplying indigent patients with drug products.

At about the same time, the presidents of three medical organizations, testifying at a Senate Subcommittee hearing in Washington, said that the relationship between the drug industry and physicians is healthy and free from collusion.

In the midst of this dialogue, a program developed by a pharmaceutical company was made available to physicians throughout the nation. Interestingly enough, it first found acceptance with medical students and now is being enthusiastically received by practicing physicians.

The program developed by Smith Kline & French Laboratories, Philadelphia, is called "Conversations in Medical Ethics." It is designed to stimulate discussions among doctors as well as students about the vital medical-social issues of abortion and prolonging life.

Conducted successfully since the fall of 1967 in Philadelphia, the program was sponsored by SK&F in cooperation with the Academy of Religion and Mental Health of New York City. Students at local medical schools termed it a needed and worthwhile effort, prompting the Philadelphia manufacturer of prescription medicines and other health-related products to make it available nationally to all interested physicians, particularly residents and interns, as well as medical students.

The program consists of black and white, 16-millimeter sound film and literature on subjects of growing concern in contemporary society: "Abortion" and "Prolonging Life." Additional material on other themes is being prepared.

The films are a series of short, pertinent comments by a cross-section of physicians. They discuss candidly each subject as it relates to the individual, the family, society and the law as well as the ethics of the medical profession. No viewpoint is endorsed. The films are meant to encourage discussion by the audience.

Because most medical schools don't offer formal courses in such subjects, students have welcomed the opportunity to orient themselves to problems they'll encounter when they enter practice. Nearly half of some 6,000 students who were among the first to participate in the program, rated it as excellent. The remainder judged it good. There were no lesser comments.

Through the years, motion pictures have played an important part in the services made available by SK&F to the medical profession. SK&F's film center is one of the most extensive in the industry, offering thirty-seven film presentations on free loan to members of the medical profession. Prepared in cooperation with some of the most eminent medical men in the country, the films deal with subjects in medicine, emergency resuscitation, mental health and retardation, nursing, careers in medicine and the marketing of prescription drugs.

In the eight years since the film center was established in 1961, some 40,000 showings were scheduled. Most were to professional medical groups whose members regard the films as a valuable contribution to their continuinge ducation.

One of the most recent films to be added to the library points up the fact that the presentations are timely and relevant. It is a six-minute color film on recognition of narcotic withdrawal symptoms in newborn infants. A physician is shown comparing the responses of addicted and non-addicted infants to several simple tests.

Supporting literature is available for many of the films. In addition, SK&F offers a variety of booklets and pamphlets, as well as periodicals for and by physicians.

The firm's newest concept in service for hospital physicians is a mobile theater of information called Eskavan. It is a specially-designed coach, comparable in size to a thirty-passenger bus, which visits hospitals throughout the country.

Inside Eskavan a physician may watch medical "mini-films" on ten subjects. Individual film projectors are equipped with headphones to maintain a relaxed, noise-free atmosphere. The films focus on a variety of subjects including neonatal addiction, shock management and cardiopulmonary resuscitation.

Beyond the film area is a reception compartment where services and products of SK&F are displayed. A Professional Service Representative is on hand to answer questions and discuss the use of these services and products with physicians.

The unique feature of Eskavan is that it makes films and information available in one place with no interference of hospital space or activities. It is a comfortable, self-contained unit which even features a telephone for emergency calls from the hospital switchboard.

If SK&F seems to have borrowed film techniques from the entertainment world to communicate medical advances, then it undoubtedly repaid its debt in pioneering color television. As early as 1948, SK&F began investigating the possibilities of color television for demonstrating surgical and medical procedures at medical meetings.

At the time color TV was in the experimental stage under the guidance of a world-renowned physicist at Columbia Broadcasting System's Research Laboratories, Dr. Peter Goldmark. SK&F asked Dr. Goldmark to supply special equipment for use in operating room and clinic.

That was the beginning of a unique association involving a pharmaceutical manufacturer, the largest commercial broadcasting system in the world and leading members of the American medical profession. From it was to come the first color broadcasting system to be approved in the United States and a revolutionary method of teaching medicine.

Dr. Goldmark, the inventor of the long-playing record and the newly-developed Electronic Video Recording system, said recently that the Medical Color Television program developed with SK&F "had a lasting impact on medical teaching. It was the greatest contribution to medical teaching in medical history."

The president of the CBS Research Laboratories further explained that SK&F's interest came at an ideal time. It provided some urgency to the work that was being done and gave Dr. Goldmark and his associates impetus to move ahead, make plans and design equipment.

The first non-experimental color television program in the United States was transmitted June 6, 1948 at a meeting of the American Medical Association in Atlantic City. It included an appendectomy, a cesarean section and a bone graft procedure.

From Atlantic City, the SK&F Medical Color Television program grew to the point where it served the medical, osteopathic and veterinary professions at an average of 20–25 scientific meetings a year. In a typical year crew members would travel some 30,000 miles.

The program achieved many firsts in the years that followed and made an impact on medical teaching and procedure. Dr. Goldmark commented recently: "Television might have been developed as a teaching tool by the medical schools and great hospitals without SK&F's program. But who's to say they would have . . . and to what extent."

Some time ago, SK&F polled 1,000 doctors. Eighty-one per cent answered that they preferred color television to in-person presentations at medical meetings. And 84 per cent said they preferred color television viewing to witnessing surgery in the traditional amphitheater.

Today, many medical schools and hospitals regularly use color television as a teaching medium. Television has become a widely available instructional tool—a fact which influenced SK&F's decision to discontinue its program a few days before the twentieth anniversary of its debut in Atlantic City.

The success of the program speaks for itself. And it has served as a guideline for SK&F in providing services which are relevant to the medical community.

The camera *used in the first non-experimental color telecast in history is donated to the Smithsonian Institution in Washington, D.C. by Smith Kline & French. Camera was used by SK&F in its pioneering Medical Color Television program and was designed by the Engineering and Research Laboratories of the Columbia Broadcasting System. Shown examining the camera during ceremonies at the Smithsonian on July 30 are (from left) Dr. Bernard S. Finn, Director of the Smithsonian's Department of Electricity; Dr. Kendall A. Elsom, formerly medical adviser to SK&F's color television program; Louis W. Crist, of SK&F, long-time manager of the color television unit and G. Frederick Roll, SK&F's Assistant to the President for Government & Industry Affairs.*

Syntex STILL A
OF

At almost the same time Syntex started in 1944 an unusual and even daring idea began to form in the minds of the new company's management of vigorous young scientists—an idea that had far-reaching implications for medicine, the total impact of which cannot be measured for many years.

The idea was simple, and natural enough to the scientific minds that conceived it: Syntex would continue as it had begun—as a company of scientists. But the carrying out of the idea was anything but simple; a new kind of organization would have to be evolved, one that could be committed to the long-range possibilities of basic research as well as to the obvious short-range necessities of the market which would enable it to survive.

For a tiny group in Mexico which wanted to expand in the huge world pharmaceutical industry the idea was revolutionary. That it has succeeded is plain to see.

The most recent evidence of its success, and an excellent example of long-range Syntex research, is the new Syntex chlormadinone acetate "minipill." This oral contraceptive development was not the result of research geared solely to the current market place. Typically, it had its beginnings in the long fundamental Syntex research that led to the synthesis of norethindrone in 1951. In those days it could not be foreseen that this new compound, the first orally active progestational agent, would make possible the development of oral contraceptives.

From there the thrust of Syntex research took it, along with other pharmaceutical companies and researchers, through a number of improvements and discoveries in contraceptive agents. Chlormadinone acetate was first synthesized by Syntex scientists in 1958, only one of some sixty new compounds the company had synthesized in its search for more active progestational agents.

The sole active ingredient of the "minipill" is chlormadinone acetate. Because of its extremely high activity, the "minipill" has the lowest hormonal content of any tablet thus far. It permits a regimen of continuous daily dosages, relieving the patient from the necessity of counting days.

Perhaps even more significant, chlormadinone acetate does not affect the pituitary-ovarian cycle at all; ovulation remains normal and a woman's natural hormones govern her menstrual periods.

The new Syntex approach relies solely on the production of a sticky, rather than the normal slippery secretion by the cervical glands. This sticky secretion in the cervix forms an effective physical barrier to the passage of sperms.

The scientific emphasis that continues to govern Syntex research has also been effective in other fields besides reproductive physiology. For example, in 1958 Syntex synthesized fluocinolone acetonide, an effective new corticoid for the treatment of skin inflammations. Industry research in topical corticoids had not been as active as in systemic corticoids.

The reaction of Syntex to this research opportunity clearly demonstrated how well the company's pioneers had built its new approach to pharmaceutical research. The topical corticoid resulting from the Syntex effort is perhaps the most complex pharmaceutical product manufactured anywhere in the world. It was on the market in 1961, less than four years after the fluocinolone acetonide synthesis.

It is only natural that Syntex research often takes surprising turns; its creative group of young, independent-minded scientists make surprise inevitable. But the creativity is carefully nurtured and brilliantly directed.

Recently, Syntex announced the synthesis of antherdiol, a sex hormone of *Achlya bisexualis*, an aquatic fungus. As a result, the door has been opened for new studies on the possible role of this hormone in plant propagation.

The synthesis by Syntex scientists of ecdysone, a key secretion in insect metamorphosis, may eventually lead to discriminate control of insect populations through manipulation of insect body chemistry instead of the indiscriminate insecticides. In 1968 a new company, Zoecon Corporation, was formed to pursue this fundamental research. The company is headed by Dr. Carl Djerassi, who continues as President of the Syntex Research Division.

Zoecon is only one of four new companies that have been created by the energies of Syntex scientists. Alza Corporation, headed by former Syntex Laboratories president Dr. Alejandro Zaffaroni, is engaged in basic research on radically new methods of delivering drugs to the human body.

Synvar Corporation, formed jointly by Syntex and Varian Associates, is involved in highly speculative research on revolutionary new methods of transmitting energy.

Commercial prospects, if there are any, for these new Syntex companies are wholly unpredictable at this time. The fact that the companies exist at all is testimony to the steady direction of a management whose early decision was to rigorously pursue the challenges of basic research.

The Institute of Molecular Biology, one of six Syntex Research institutes, was one of the first, and is now certainly the largest, commercially sponsored laboratory to make intense fundamental studies of the nucleic acids, DNA and

COMPANY SCIENTISTS

RNA. This is perhaps the longest-range activity at Syntex. Although there has been much speculation about a "new medicine" based on manipulation of the human cell, medicines related to nucleic acids are apt to be a long time in coming, if they come at all.

Syntex Corporation spends twelve cents of every sales dollar for research. It is one of the highest percentages in the pharmaceutical industry. In less than twenty-five years, the company has grown from a tiny laboratory to a rapidly expanding company of 3000 people in many countries of the world.

Even with this breathtaking growth, Syntex remains a company of scientists. Dr. Albert Bowers, now President of Syntex Laboratories, the U.S. subsidiary and administrative and marketing arm in the United States and Canada, is himself a noted scientist. He has published nearly 100 scientific papers as well as having originated some 120 U.S. patents.

The scientists largely responsible for shaping the Syntex approach are still there. Dr. George Rosenkranz, corporation board chairman, Dr. Djerassi and Dr. Zaffaroni, along with Dr. Bowers—all eminent scientists—make up more than half of the corporation's seven-member board of directors.

Under their leadership, the company's program of postdoctoral fellowships is unprecedented in scope for an industrial laboratory. The fellows come from all over the world and most plan to return to their native lands, taking their new knowledge, training and skill with them.

This is understood and respected by Syntex management; they have been training scientific talent since the early days in Mexico which then had virtually no chemical industry to provide experience for its university graduates. Indeed, this is one of the proudest chapters in Syntex history.

One of the attractions Syntex has for talented scientists is the company's liberal publishing policy which permits them to advance their own professional careers by frequent publication in scientific journals under their own name, as soon as possible.

This generous policy has given others fast access to the Syntex proliferation of findings, but Syntex feels that on balance it has benefited the company's research efforts as well as science. Syntex scientists have published nearly 600 such papers since 1949.

What kind of a scientific organization has Syntex evolved that operates so successfully in so many fields? Aside from the new Syntex spin-off companies, the corporation's research is the responsibility of the Syntex Research Division. The division is made up of six individual institutes, each separate and distinct with its own director, each with its own projects and goals.

But separate as they are, they function in a continual interdisciplinary relationship that is unique in the industry. Under Dr. Djerassi, the institutes comprise a kind of round-table of scientists of many disciplines who share their problems and their findings on an almost daily basis.

Dr. Djerassi himself, a brilliant scientist who took his Ph.D. at the age of 21, is also Professor of Chemistry at nearby Stanford University where he is a colleague of Nobel Laureate Dr. Joshua Lederberg, one of several world famous scientists working as consultants and advisors to Syntex Research.

More than a quarter of the 300 people working in the Syntex International Research Center in Palo Alto hold M.D. or Ph.D. degrees. Thirty are postdoctoral fellows doing basic research under senior Syntex scientists.

The Institute of Organic Chemistry is involved with new anti-inflammatory agents, hormonal treatments for menopausal problems and new approaches to oral contraception, of which the "mini-pill" mentioned earlier is the latest.

Though much has been learned about natural hormones, science does not yet know precisely how they perform their functions. The Institute of Hormone Biology seeks that knowledge while also testing compounds with potential value in human or animal medicine.

In like fashion, the other institutes carry out basic research projects while attending to the needs of developing new products. The Institute of Pharmaceutical Sciences is involved with drug dosage forms. The Institute of Clinical Medicine prepare detailed information on new drugs from laboratory and clinical studies.

A broad range of research with animals is conducted by the Institute of Veterinary Science directed at improving their productivity, reproductive performance and growth.

Syntex scientists are encouraged to follow their own ideas without any preconceived idea of biological use or commercial application. For example, of all the steroid compounds with biological activity patented or reported during 1961 and 1962, 37 per cent were discovered by Syntex scientists.

In basic steroid research, in the investigation of the nucleic acids, in the search for new drug delivery methods, new approaches to insect control, new means of increasing world food production, new systems for moving energy, Syntex holds true to its original idea of 25 years before. There is ample evidence of the ability and willingness of Syntex scientists to depart from the traditional ways in order to achieve their exciting and ambitious goals.

Scene from the film, "Lillehei on Stagnant Shock."

Filmed with pride

UPJOHN: VANGUARD OF MEDICINE

The old cliche that there is "nothing new under the sun" might be disputed by the thousands of physicians who have seen one or more films in the Upjohn "Vanguard Of Medicine" series. These films enable the practicing M.D. to keep up to date in significant developments in his profession although busy schedules minimize free time.

Films in the series make no attempt to teach medicine. Rather, they present a concise status report in twenty minutes of developments and innovations that otherwise might remain obscured in the literature. And as with reading the literature, the films present a fair balance of opinion—and without editorializing. For example, in "The Obsolete Menopause," the entire spectrum of menopause treatment was examined. And significantly, concepts, not products, are stressed.

The film medium offers many advantages over the printed or spoken word. Using a blackboard lecture is not making full use of the medium—and physicians understandingly tend to balk at this type of motion picture. On the contrary, Upjohn's film, "Lillehei On Stagnant Shock," proves with cinemicrography of the dog's mesentery microcirculation *in vivo*, that vasodilatation with corticosteroids is more effective than so-called "standard" therapies in stagnant shock.

Upjohn's professional film library currently contains twenty-six active titles and 1,846 prints. These are available for use on a temporary free-loan basis by medical schools, hospitals, and by state and county medical associations. Of even greater significance, however, is the dramatically expanding distribution base comprising regional medical networks, under the aegis of the federal heart disease, cancer, and stroke program. As of January 1, 1969, contracts for use of Upjohn films had been signed by eleven medical networks.

Most regional medical programs use 8mm films on cartridge-load automatic projectors. The University of Wisconsin, for example, ordered fifteen prints each of five Upjohn films for rotation to the forty Wisconsin hospitals comprising their pilot network. Other networks are utilizing television, either closed-circuit or scrambled. The Louisiana Hospital Television Network has made film-to-tape transfers of the entire film library, and in one week broadcast eleven different Upjohn films, for a total of seven hours of programming, on their seventeen hospital network. The USC/UCLA/Loma Linda/UCCM Network, on the other hand, is using Station KCET, but scrambling their telecasts to seventy-one Los Angeles area hospitals, which have unscrambling equipment on their receivers.

In another area of presentation, much of Upjohn's film "Cold-Light Endoscopy" was incorporated into Walter Cronkite's "Twenty-first Century" series program titled "An Incredible Voyage," and telecast on the CBS Network. Recently the British Broadcasting Corporation requested permission to utilize portions of the same film in a television special on the inside of the human body.

But as with athletics, awards speak louder than words. At the State Department's Council on International Nontheatrical Events Annual Awards presentation ceremonies in Washington, D.C., the last four films in the Upjohn series won a total of five honors: two Cine Golden Eagles, a Purkinje Medal from the Brno, Czechoslovakia Festival, and honors from the Padua, Italy, and the Sao Paulo, Brazil, Festivals went to "Cold-Light Endoscopy," "Locomotion of Cancer Cells *In Vivo* Compared with Normal Cells," "The Obsolete Menopause," and "Myocardial Revascularization Vineberg Procedure."

One of the reasons for the success and praise the films have enjoyed is the high calibre persons Upjohn has the privilege to work with. Another film scheduled for release is titled "X-Ray, Ultrasound, And Thermography In Diagnosis." It is being made by Dr. Norman P. Schenker of Munich and Geneva with the cooperation of Pennsylvanians, Drs. Hodes, Freundlich, and Wallace of Jefferson and Haberman of Temple Medical Schools. In the past, Upjohn film participants have included the University of Pennsylvania's Drs. H. L. Bockus, F. D. W. Lukens, E. P. Pendergrass, and I. S. Ravdin, and Jefferson's W. P. Havens, Jr., and Philip J. Hodes.

WYETH LABORATORIES

The Corner Drug Store

In suburban Philadelphia on a twenty-seven acre wooded tract stands the home offices of Wyeth Laboratories. There in a modern glass and steel building with a solid Pennsylvania fieldstone base are located the home office of Wyeth and the Wyeth Institute for Medical Research. This is home base for a company that employs more than 11,500 persons in its domestic and foreign operations and which in its 109-year history has experienced a remarkable growth from a small Philadelphia pharmacy to one of the leaders in the pharmaceutical world.

In 1860 John Wyeth, a young graduate of Philadelphia College of Pharmacy, and his brother Frank opened a small drug store on Walnut St. at a site directly behind where the Bellevue-Stratford hotel now stands. John Wyeth had been a student of the man who was to become known as the "Father of American Pharmacy," William Procter, and it is likely that much of his determination to provide the very finest in pharmaceuticals stemmed from the ideals set forth by his distinguished teacher. The Wyeths soon began to expand their business by manufacturing tablets and elixirs in addition to their regular retail line.

The outbreak of the Civil War in the spring of 1861 created a demand for drugs and nutritionals such as beef extract which the new company was called upon to fill and this accounted for another step in the growth of John Wyeth and Brother.

Many innovations in pharmacy and drug manufacturing are attributed to Wyeth during the early years of the company such as introducing the first glycerine suppositories made in America, and designing the first rotary tablet press in 1872 (an example of this type of machine was in continuous use for many years at Wyeth's Philadelphia manufacturing plant until it was presented to the Smithsonian Institution for its Gallery of Pharmacy).

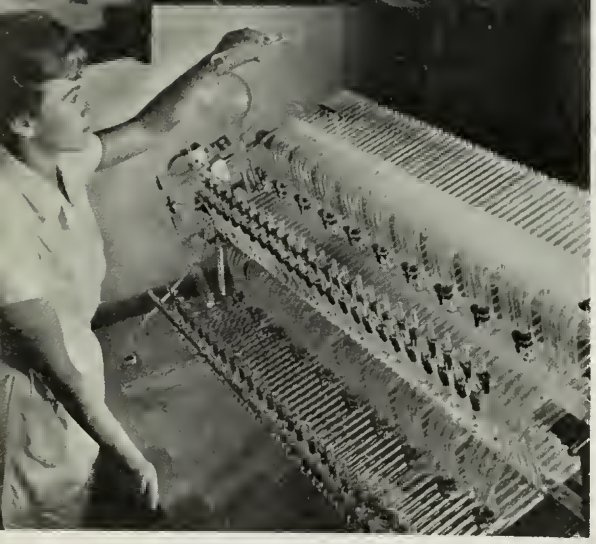
Meanwhile the old Wyeth drug store had been sold and manufacturing was carried on in the premises above the store. In 1889 a fire which started in the drug store basement quickly spread to the manufacturing areas which were destroyed. John Wyeth and Brother then moved to new and larger quarters at Eleventh and Washington Sts. in Philadelphia.

John Wyeth served as president of the company until his death at age 73 in 1907 when he was succeeded by his son, Stuart. Frank Wyeth continued as vice-president until his death in 1913. When Stuart died in 1929 he left the bulk of his estate including a controlling interest in the family business to his alma mater, Harvard. In 1932 the company was acquired by American Home Products Corporation which continued to operate it under the old name before consolidating several ethical drug companies with John Wyeth and Brother to form Wyeth Laboratories in 1943.

The next important step for Wyeth was entering the penicillin field. In 1942 Wyeth joined forces with a Pennsylvania mushroom biologist who, interested in early reports of Alexander Fleming's mold-killed germs, had obtained from the Department of Agriculture a sample of *Penicillum* notatum. In his mushroom-spawn equipment the mold flourished. Wyeth set up penicillin production with the primitive method which utilized hundreds of milk bottles as culture medium vessels. Wyeth then acquired a plant in Kimberton, Pa. which had been used for freeze-drying blood plasma for use by the armed forces and applied freeze-drying techniques to penicillin processing. The government's Office of Scientific Research and Development and Wyeth, along with twenty other companies, combined their knowledge and know-how to make penicillin available on a wide-scale basis. At one time Wyeth Laboratories was the largest single supplier of penicillin to the armed forces. In 1943 Wyeth turned out more than half of the total U.S. output of penicillin. In acknowledgement of out-

Wyeth's *worldwide administrative offices and research headquarters are located in this building in Radnor, Pennsylvania.*

Rapid *automatic determination of clinical trial samples at the Wyeth Institute for Medical Research.*



Purification *of new drug substances by liquid-liquid extraction at the Wyeth Institute Medical Research.*

standing achievement in producing medical supplies during World War II, the government gave to Wyeth the first Navy "E" ever awarded a pharmaceutical manufacturer.

New penicillin dosage forms and production techniques were later developed at Wyeth's West Chester, Pa. facilities. The company's unique contribution, however, was BICILLIN® (benzathine penicillin G) an injectable penicillin which provided the most prolonged penicillin blood levels capable of assay.

Since then, through licensing agreements, Wyeth has made available pencillin V, known as PENVEE® (phenoxymethyl penicillin), CYCLAMYCIN® (triacetyloleandomycin) and the semisynthetic penicillins DARCIL® (phenethicillin potassium), OMNIPEN® (ampicillin), PATHOCIL® (sodium dicloxacillin monohydrate) and UNIPEN® (sodium nafcillin).

Perhaps equally important to the antibiotics in terms of benefit to humanity are the ataraxics—drugs like EQUANIL® and SPARINE® which contributed so much to Wyeth's progress in the 1950's. The company's interest in this field dates from 1955 when it was licensed to market the newly discovered meprobamate under its own trade name EQUANIL®. Wyeth scientists developed the major tranquilizer SPARINE® (promazine hydrochloride) and the antipsychotic agent PROKETAZINE® (carphenazine maleate). Wyeth research also developed the minor tranquilizer SERAX® (oxazepam).

Steroid research at Wyeth has resulted in the oral contraceptive OVRAL® [each OVRAL® tablet contains 0.5 mg. of norgestrel (*d*l-13-beta-ethyl-17-alpha-ethinyl-17-beta-hydroxygon-4-en-3-one) and 0.05 mg. of ethinyl estradiol (19-Nor-17α-pregna-1, 3, 5 (10)-trien-20-yne-3, 17-diol)]. Wyeth synthesized a progestogen which combined with an estrogen, ethinyl estradiol, resulted in OVRAL®. Because potency is high, the required dosage is at least 0.5 mg. lower than that prescribed for similar compounds.

Wyeth's biological laboratories at Marietta, Pa. produced the first smallpox vaccine in the U.S. in 1882. More recently Wyeth developed DRYVAX® (dried smallpox vaccine) which assures greater stability and longer storage life. Since 1967 Wyeth has supplied most of the vaccine currently being used in a smallpox eradication program in West and Central Africa. WHO (World Health Organization) figures recently showed that this program has resulted in a 90 per cent reduction in the incidence of smallpox in the African countries participating. The Marietta plant was a major producer of the Salk killed virus polio vaccine, and among the first laboratories to perfect the complex procedures for making the Sabin live oral vaccine. (The importance of Wyeth's contribution to the polio immunization program can be shown by comparing the number of cases of poliomyelitis reported in the peak year 1952, when 52,879 cases were reported.) Another Wyeth first was Anti-venin, the only effective antidote for the venom of rattlesnakes and other members of the pit viper family.

An important contribution has been made by Wyeth to infant nutrition through S-M-A®, a comprehensive formula unique among prepared formulas because of its balanced protein and reduced mineral content—both made possible by an exclusive Wyeth method of electrodialysis of the whey component.

Wyeth has been foremost in the development of unit dose medications beginning with the TUBEX® closed injection system. More than half a billion injections have been given during the last twenty-odd years and today the system is used by 3000 major hospitals throughout the U.S. The system offers convenience, dosage accuracy and patient acceptability with all the benefits of disposables. Another feature of the unit dose-medication line is REDIPAK® (strip pack, liquid unit dose and unit of use suppository pack).

Through its world-wide affiliate, Wyeth International Limited, Inc., the company has manufacturing facilities in fifteen countries and sales outlets in more than sixty countries including England, Mexico, Brazil, Canada, Italy, Japan, Australia and India.

Wyeth's United States manufacturing facilities include plants in Paoli, West Chester and Marietta, Pennsylvania; Chicago, Illinois; Mason, Michigan; and Meridian, Idaho. Wyeth maintains distribution warehouses in fifteen states, each located in a major market area, so that a needed Wyeth product can be in the hands of the physician within hours.

BURROUGHS WELLCOME AND CO.

ANTIMETABOLITES COMPARATIVE BIOCHEMISTRY *and* CHEMOTHERAPY

The essence of chemotherapy is a selectively toxic effect; the drug must be more detrimental to the parasite than to the host. There are a number of ways in which such selective effects can be achieved, and I will explore at least two of them in some depth. But I should like first to fill in some of the background of our program.

Twenty-five years ago the world of chemotherapy was sharply divided between the screeners and the fundamentalists. The screeners were willing to test any kind of chemical compound in any model system that they hoped would resemble a clinical infectious disease.

The fundamentalists felt that it would be more profitable to turn one's attention to the fundamental physiology and biochemistry of parasites and hosts, in the hope that at some unpredictable future time, one might know enough to design chemotherapeutic agents on a rational basis. Meanwhile, scholarly pursuits would be much more satisfying intellectually than striving for practical results on a trial and error basis.

It seemed to us that some kind of middle course might be feasible.

The way to this new approach had been opened by the then recently enunciated antimetabolite theory. Soon after sulfanilamide had been found to have antibacterial activity in 1938, it was discovered that its effects could be nullified by a natural substance called p-aminobenzoic acid or pAB. Sulfanilamide and pAB are closely related chemically. It soon became clear that sulfanilamide was acting as a counterfeit pAB in the bacterial cell economy, with disastrous results to it. Work with sulfanilamide soon provided clues to the normal functions of pAB, and the chain of thought thus initiated led eventually to the isolation of the vitamin, folic acid, and to a lot of very fundamental information of the biosynthesis of nucleic acids.

We proposed to use other antimetabolites in a similar way. We hoped that, by observing their effects in biological systems, one could gain clues about the functions of their natural counterparts, and information about species differences that could lead to agents with selective toxicities. The ultimate, for the chemotherapist, is to know not only how a drug acts at the molecular level, but precisely why it is more toxic to the parasite than to the host. We have attained this with some of the drugs that have developed from our program; with one or two we are still struggling.

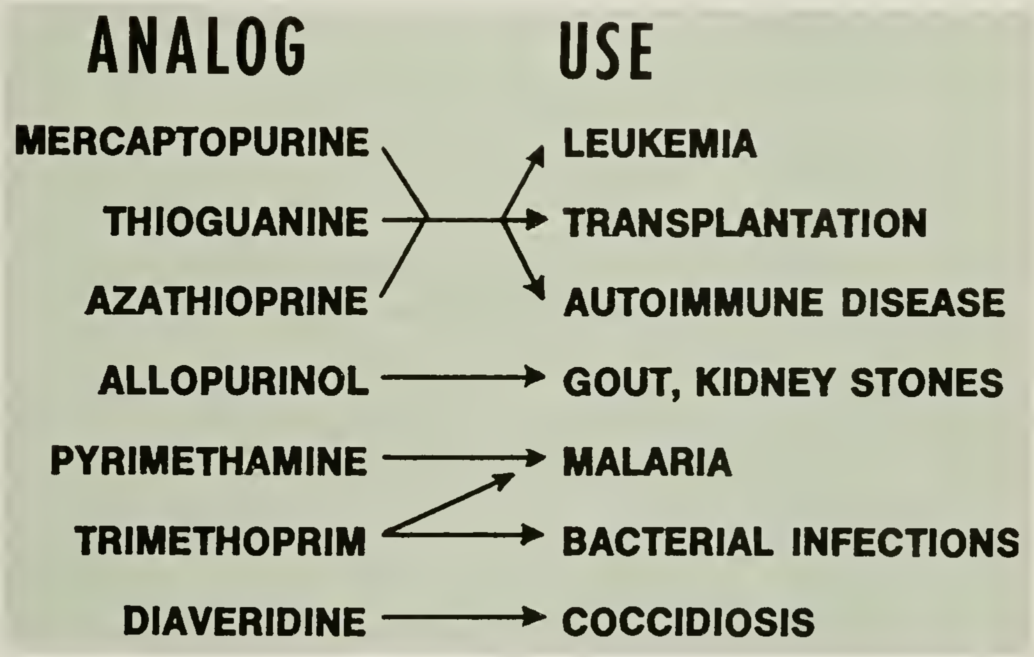


Figure 1. *Antimetabolites and Uses.*

We choose to work in the field of nucleic acids, which then seemed to be the sort of quiet backwash in which a small group could work undisturbed by outside pressures or competition. This seems ridiculous now that DNA, RNA, and the genetic code are almost household concepts. But even then, the indicators were already suggesting the coming importance of the field. The relationships between nucleic acids and genes and chromosomes were beginning to be suspected. Moreover, the pyrimidine and purine components of nucleic acids had been identified as secondary reversing agents of sulfanilamide, and as some kind of alternative to folic acid in the growth of lactic acid bacteria. So nucleic acids, folic acid, fulfanilamide and pAB were tied together into some kind of association that demanded clarification.

Nucleic acid biosynthesis seemed an appropriate target for chemotherapy for several reasons. Parasites depend for survival, to a large extent, on a rapid rate of multiplication and their turnover of nucleic acids is correspondingly high. More importantly, there seemed already to be some indications of species differences in nucleic acid biosynthesis—differences that might be used to develop selectively toxic agents.

As tools for our investigations we proposed to synthesize molecular modifications of "pieces" of DNA and RNA, analogs and potential antimetabolites of the purine and pyrimidine bases of the nucleic acids. We wanted to study them

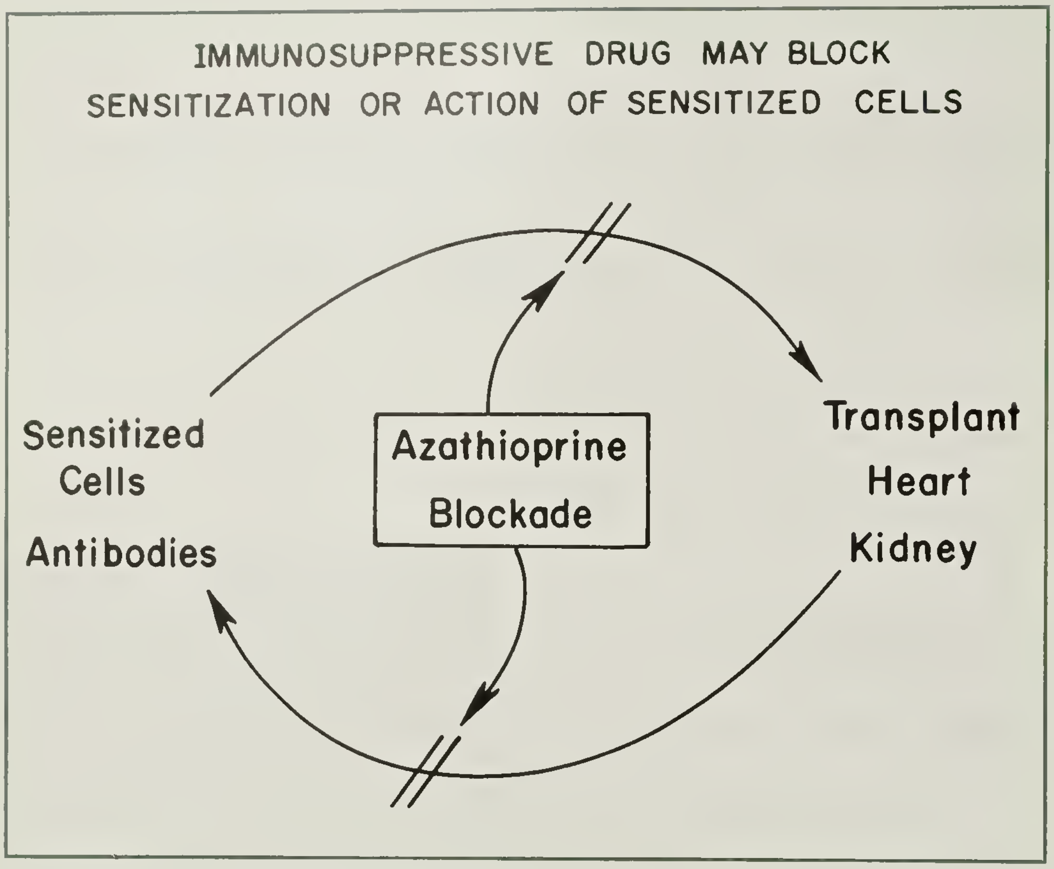
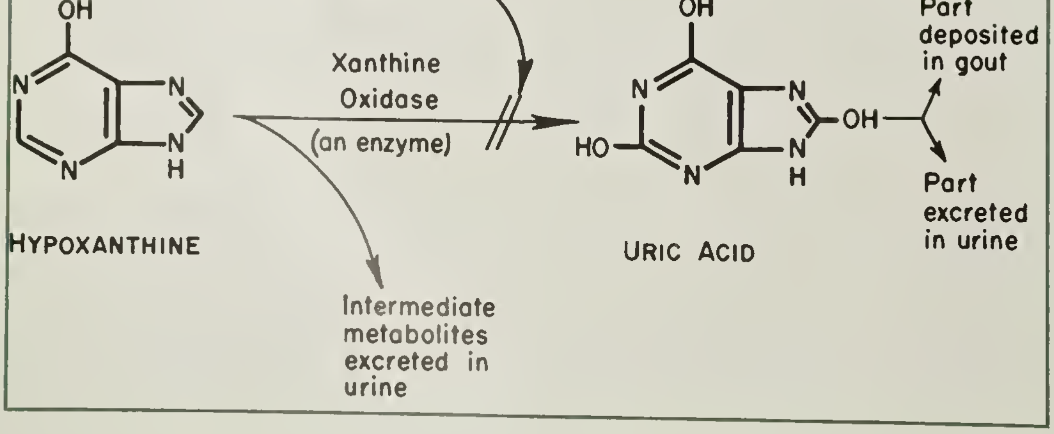

IMMUNOSUPPRESSIVE DRUG MAY BLOCK SENSITIZATION OR ACTION OF SENSITIZED CELLS
Sensitized Cells
Antibodies
Azathioprine Blockade
Transplant
Heart
Kidney

Figure 2. *Role of Immunosuppressive Drug.*

both in enzyme and more complex biological systems. There were available a few enzymes that degrade purines, such as xanthine oxidase, an enzyme that eventually proved to be important to our program. However, nothing was known about the enzymes that build up the nucleic acids in the first place, the so-called "anabolic" enzymes. As a substitute, we proposed to use cultures of *Lactobacillus casei*, an organism that could grow either on pyrimidines and purines or on folic acid. *L. casei* was thus a sort of black box of anabolic enzymes, and we could characterize our antimetabolites rather accurately by their inhibitory effects on its growth and the reversal of these effects by metabolites.

This system quickly gave us an affirmative answer to our number one question—whether it would indeed be possible to interfere with nucleic acid metabolism with the kinds of antimetabolites we were synthesizing. It also has served through the years as a reference biological system against which others could be mirrored, and thus direct attention to the sorts of diversities we sought.

Figure 3. *Mechanism of Action of Allopurinol.*



One advantage of the method of working we proposed was that we were uncommitted as to targets, and free to follow our thoughts and antimetabolites wherever they might lead us. They have, in fact, led us unto agents for the treatment of such diverse diseases as malaria, leukemia, gout, bacterial infections and autoimmune disease and into organ transplantation. The purine analogs have some rather specialized uses; the diaminopyrimidines are a group of very selective antiinfectives, and the reasons for their selective effects can be understood very precisely.

I wish to spend a few minutes now on two contrasting analogs of the purine base hypoxanthine, 6-mercaptopurine and allopurinol.

6-Mercaptopurine and allopurinol are both simple isosteric analogs or molecular modifications of hypoxanthine, that is, substances in which one or another atom of the metabolite is replaced by a different atom. They are both antimetabolites of hypoxanthine, but their roles are almost diametrically different.

When 6-MP was tested in the *L. casei* system, growth was strongly inhibited, this inhibition was reversed by hypoxanthine. This substance then looked like the kind of antimetabolite that could interfere with nucleic acid biosynthesis in a fundamental way, and we quickly broadened the testing to other systems with rapid nucleic acid turnover. The compound inhibited transplantable tumors in animals, and was soon found to produce remissions in children with acute leukemia.

All this took place some years before the anabolic biosynthetic reactions of purines had been elucidated. When these reactions became known, it was clear that hypoxanthine, in the form of its ribonucleotide, was the key substance in all of purine metabolism. 6-Mercaptopurine is a faithful imitator. It is transformed by the enzymes in living cells into a molecule that is the sulfur analog of the hypoxanthine derivative. This analog then is acted on by a series of additional enzymes, and in several of these reactions it is not only a substrate but also an inhibitor. The complexities are such that up to now it has not been possible to define precisely why it has selectively toxic effects on leukemic and other lymphoblastic cells. But it is a valuable tool for study of the enzymatic reactions in which it participates, and it remains a useful antileukemic agent.

Reflections on the metabolic fate os 6-MP led to two other useful drugf, azathioprine, Imuran, and allopurinol, Zyloprim.

While it had become clear that, to be active in leukemia 6-MP had to be converted by living cells to a more complex form, we found that most of the drug given was destroyed by the body and excreted as inactive products. We thought that if we could somehow protect the drug from this destruction, it might do more therapeutically and act more selectively.

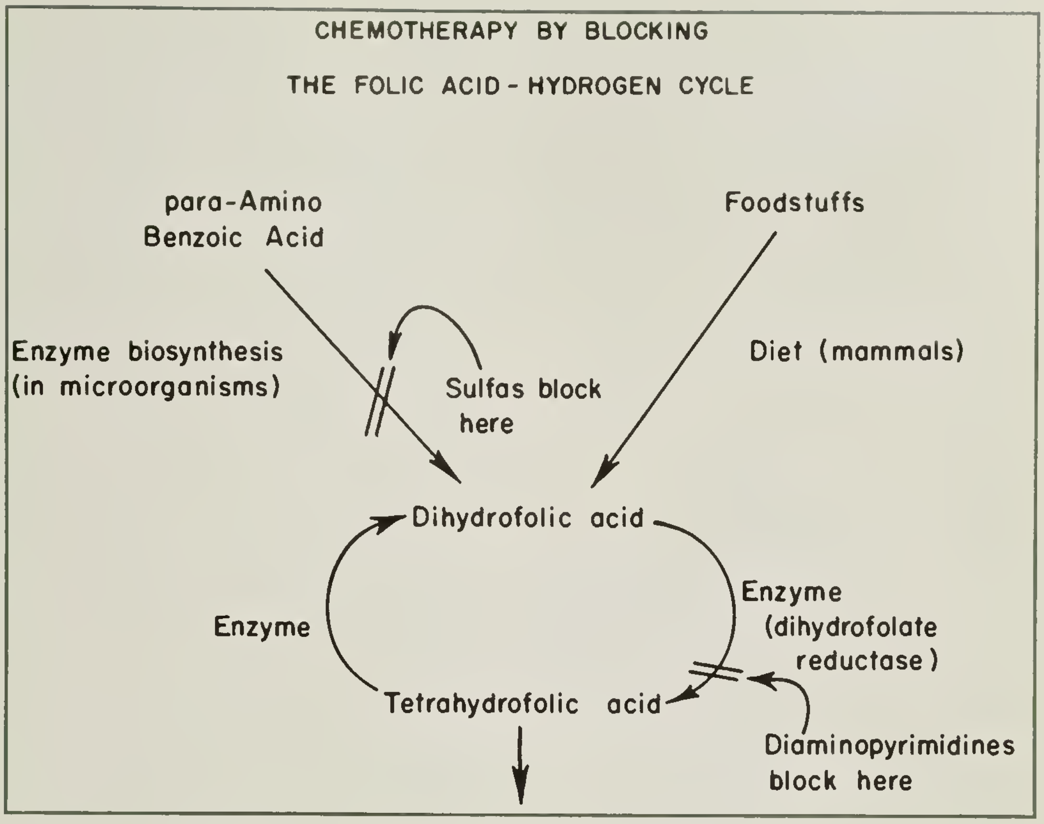
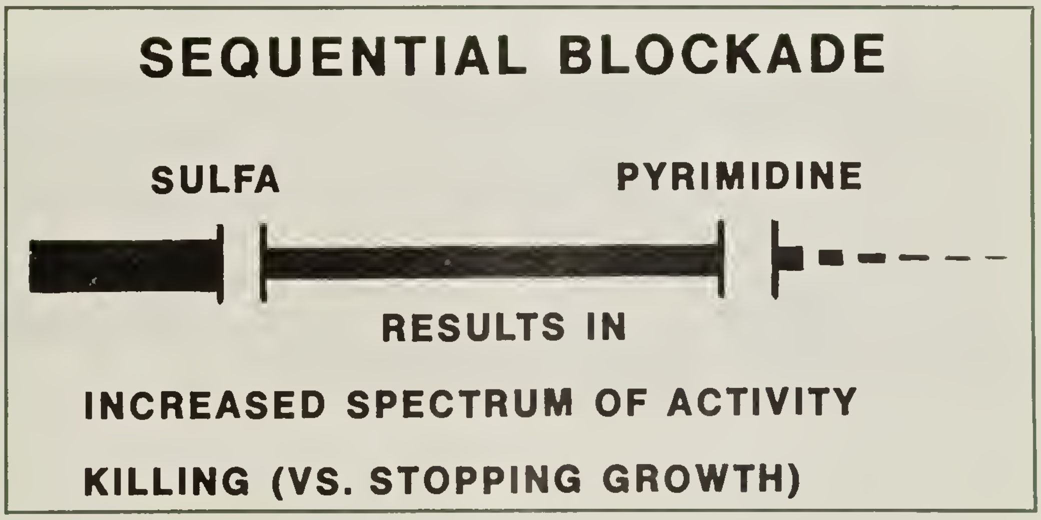

CHEMOTHERAPY BY BLOCKING
THE FOLIC ACID - HYDROGEN CYCLE
para-Amino Benzoic Acid
Foodstuffs
Enzyme biosynthesis (in microorganisms)
Sulfas block here
Diet (mammals)
Dihydrofolic acid
Enzyme
Enzyme (dihydrofolate reductase)
Tetrahydrofolic acid
Diaminopyrimidines block here

Figure 4. *Blockade of Folate Synthesis and Utilization.*

One approach to this problem was to attach a removable group to the drug—a group that would get it past the first site of destruction in the liver, and then release the drug in the leukemic cell. Azathioprine was one of these derivatives, and the one we selected as having the best balance of stability and lability. When put to test as an antileukemic it was not significantly better than 6-MP. But this drug got a second life. This came out of the discovery by Schwartz and Dameshek in 1958 that 6-MP could modify and suppress immune responses. This was just the tool that the surgeons interested in organ transplantation were waiting for. They had shown that they could remove a kidney from a dog, reimplant it, and have it function perfectly. But, if they put it into a different individual, it would function a few days, and then be destroyed by the immunological reactions of the recipient. 6-MP was tried, and did work to some extent. However, observations of our toxicologist, and laboratory experiments on immunosuppression, suggested that azathioprine might be a more effective immunosuppressant than 6-MP. In fact, this turned out to be true. It produced prolonged survival of kidney transplants in dogs, and gave the surgeons courage to attempt a similar transplant in a human subject. One of the very early subjects lived two years after he had been given up for lost. During the seven years since that first transplant, there have been modifications and improvements in treatment but almost all of the 2500 kidney transplant and 150 heart transplant subjects have received azathioprine as the basic component of the immunosuppressive regimen used. Some of the kidney transplant patients are now in their fifth and sixth years post-transplant and a heart transplant patient has just passed the first anniversary of the operation.

The other attempt to modify the metabolic destruction of 6-MP involved allopurinol, the other analog of hypoxanthine I have mentioned. You may remember, too, that one of the biological tools available to us when we started was the enzyme xanthine oxidase. This was the enzyme we had found to be responsible for most of the destruction of 6-MP. Allopurinol fit the purpose exactly. It did not inhibit *L. casei* or other growth systems, and therefore did not seem to get involved with nucleic acid metabolism. But it did inhibit xanthine oxidase very strongly. So it seemed to be the ideal candidate to see whether we could block the destruction *in vivo*. At this point the experiment became double barreled. The destruction of 6-MP by xanthine oxidase gives thiouric acid. This is an exact parallel of the way in which uric acid is formed as the endproduct of nucleic acid metabolism. It has been known for 100 years that excessive uric acid leads to gout, kidney stones and, we might add, some of the renal complications of cancer chemotherapy. Various ways had been found to rid the body of excessive uric acid, but these did not

Figure 5. *Consequences of Sequential Blockade.*



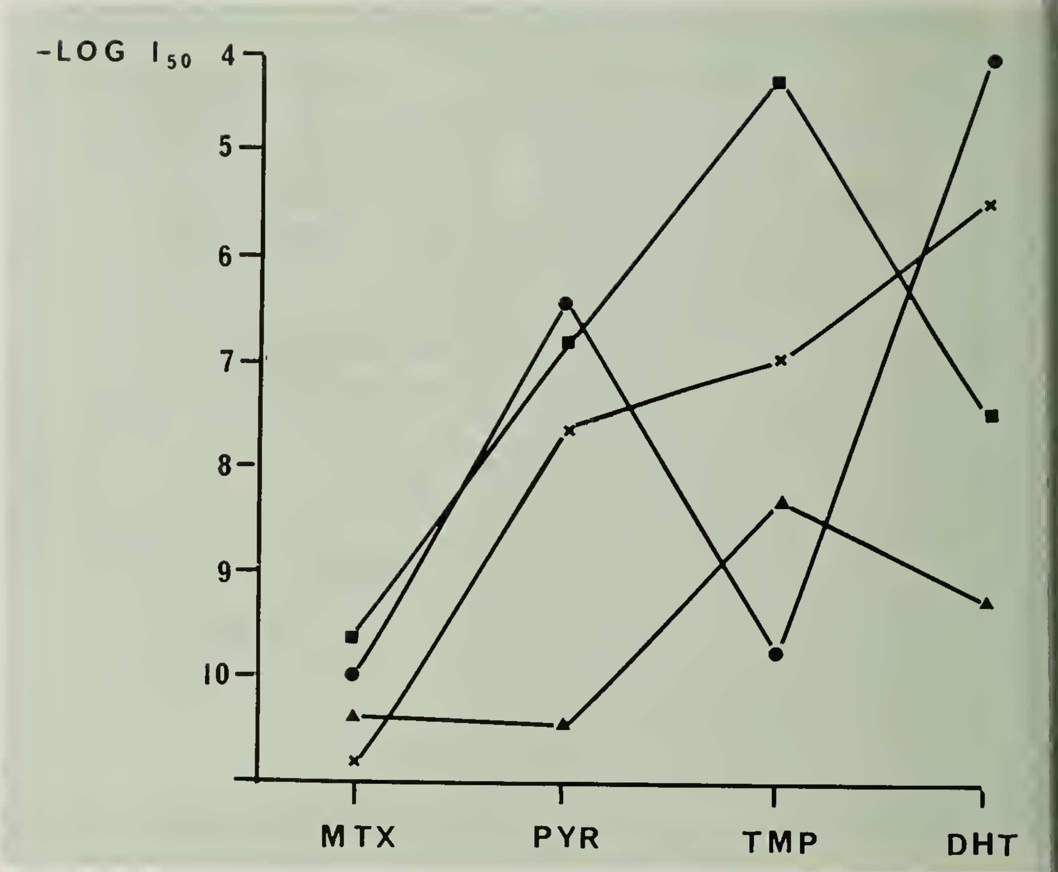


Figure 6. *Selective Binding of Inhibitors to Dihydrofolate Reductases of Various Species Concentration of inhibitor (in moles per liter) to produce 50% inhibition of the enzyme from th source indicated.*

—■—■— *Homo sapiens*
—●—●— *Escherichia coli*
—▲—▲— *Plasmodium berghei*
—X—X— *Trypanosoma equiperdum*

MTX—methotrexate
PYR—pyrimethamine
TMP—trimethoprim
DHT—1-(p-butylphenyl)-1,2-dihydro-2,2-dimethyl-4,6-diamino-s-triazine.

altogether solve the problems. Some thought had been given to the possibility of decreasing uric acid production, but attempts to do this by interfering with early steps in purine biosynthesis, predictably, affected all the cells of the body. It seemed more logical to us to focus on the last step in uric acid formation, the step involving xanthine oxidase. Allopurinol worked even better than expected. It does spare and potentiate 6-MP. But its more important application is in gout and hyperuricemia. The load of excretory purine end product becomes distributed between uric acid, which is excreted with difficulty, and its precursors which are excreted easily, so both tissue and urinary uric acid concentrations are reduced. This has made it possible to dissolve solid tissue deposits, and to prevent uric acid kidney stones and some of the more damaging consequences of hyperuricemia.

Out of several hundreds of purine analogs, I have illustrated two that have useful applications, 6-MP because it fits the anabolic enzymes and gets involved in nucleic acid metabolism, and allopurinol because it does not, but can displace hypoxanthine and xanthine from xanthine oxidase.

My chief purpose is to endorse a method of working—a method of working that begins with a concept of the biochemistry involved, and by an interaction of testing and design can lead to useful therapeutic agents. This sort of purposeful exploration of enzymes and metabolic pathways can be both intellectually stimulating and productive. Above all, as we see it, the results are cumulative. The solution of one problem leads to the development of tools and understanding that facilitate the solution of the next. Thus, we foresee a gradual diminution in the necessity for empirical testing, an increasing competence in design, and a gradual accumulation of drugs and agents whose mechanisms of action can be precisely defined.

REFERENCES

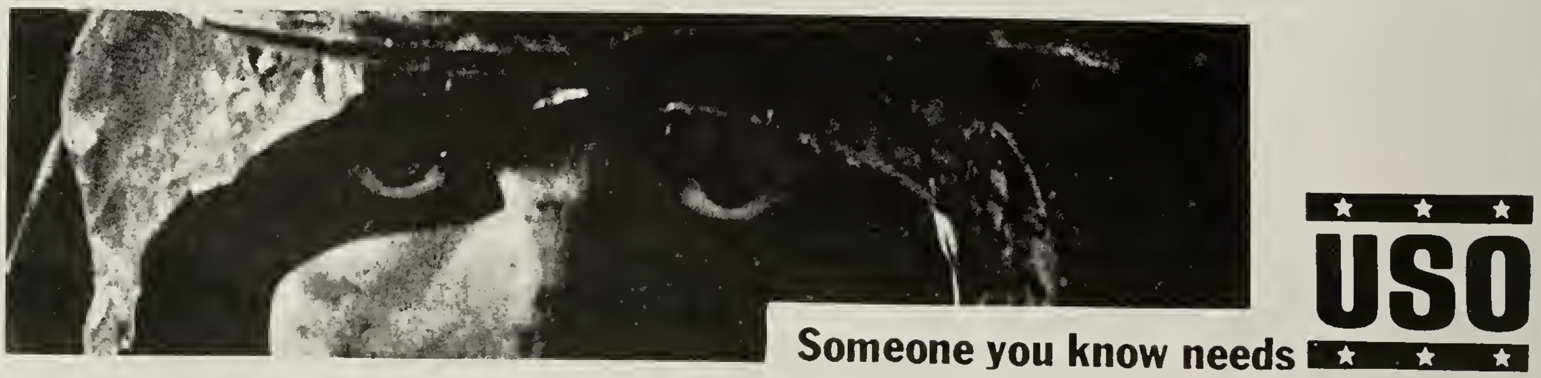
1. Elion, G. B. and G. H. Hitchings: Metabolic basis for the actions of analogs of purines and pyrimidines. Advances in Chemotherapy 2: 91–177, 1965.

2. Hitchings, G. H.: Antimetabolites and chemotherapy: integration of biochemistry and molecular manipulation, in P. A. Plattner, ed., Chemotherapy of Cancer, Elsevier, Amsterdam, 1964, p. 77–87.

3. Hitchings, G. H. and J. J. Burchall: Inhibition of folate biosynthesis and function as a basis for chemotherapy. Adv. in Enzymology 27: 417–468, 1965.

4. Hitchings, G. H. and G. B. Elion: Purine analogues, in Metabolic Inhibitors, Vol. 1, ed. by R. M. Hochster and J. H. Quastel. Acad. Press. New York 1963, p. 215–237.

5. Hitchings, G. H. and G. B. Elion: The role of antimetabolites in immunosuppression and transplantation. Accounts of Chemical Research. 1969, in press.



McNEIL LABORATORIES

Histamine is a major constituent of mammalian tissues and has, at one time or another, been implicated in a wide variety of physiological functions such as gastric secretion, inflammation, nidation, the allergic response and wound healing. Based on the fact that histamine is involved in a number of biological processes, it seemed reasonable that the control of tissue histamine levels might have potential therapeutic usefulness. Thus, a search for compounds that would inhibit the major enzyme, histidine decarboxylase, responsible for the production of tissue histamine was undertaken in our laboratory. The first step in such a research project was to search for an inhibitor of histidine decarboxylase using isolated enzyme preparations, then to demonstrate that the inhibitor was capable of inhibiting histamine biosynthesis in an intact animal. If this inhibition should be demonstrated, it would then be necessary to show that decreased tissue levels of histamine resulted and that this might be of specific therapeutic benefit.

The Chemical Control of
HISTAMINE BIOSYNTHESIS

Prepared by the Research Division
McNeil Laboratories, Inc.

There is evidence that histamine is the final chemical mediator of gastric acid secretion and that histidine decarboxylase is the major enzyme responsible for its production in the stomach; therefore, inhibition of this enzyme seems to offer a promising method of controlling gastric acid production. Radwan and West, in 1967, reported the presence of two distinguishable histidine decarboxylases. A number of observations indicated that two separate enzymes exist: starvation in the rat had little effect on histidine decarboxylase present in the pyloric region of the stomach but caused complete disappearance of the enzyme present in the fundic region.

Based on its catalytic capabilities, the pyloric enzyme was indistinguishable from histidine decarboxylase isolated from rat fetal liver. Fetal and pyloric enzyme function most effectively at approximately pH 7 (neutral). The fundic enzyme, on the other hand, exhibited a pH optimum between 4.6 and 6.4. Concerted action of fundic and pyloric histidine decarboxylases would, thus, enable the rat stomach to produce histamine between pH 3 and 7.

Kinetic analysis indicated that several known inhibitors of histidine decarboxylase inhibit pyloric and fetal enzyme by a common mechanism and to the same degree. These relations were explored with representatives of three classes of inhibitors: 1) A substrate analog, α-methylhistidine, 2) a hydrazine, toluenesulfonic acid hydrazide, and 3) acidic anti-inflammatory drugs such as indomethacin.

The inhibition was competitive with the substrate in all cases, and the degree of inhibition essentially identical for pyloric and fetal enzyme. At the concentrations studied, fundic histidine decarboxylase was completely insensitive to inhibitors of the three classes. When preparations of pyloric and fetal histidine decarboxylase were subjected to heat incubation, the two activities were gradually inactivated. Incubation at 53° C resulted in a parallel loss of activity. The "half life" of the two preparations was indistinguishable both in the

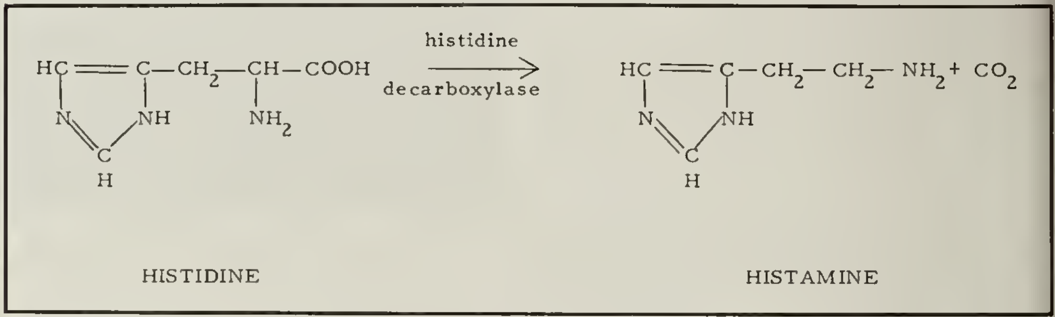
Through these doors pass the world's best excuses for not using safety belts.

PROPERTIES OF HISTIDINE DECARBOXYLASES

	Enzyme		
	Fetal	*Pyloric*	*Fundis*
pH optimum	7	7	~5.5
Sensitivity to Inhibitors			
α-methylhistidine	yes	yes	no
toluene sulfonic acid hydrazides	yes	yes	no
indomethacin	yes	yes	no

presence and absence of pyridoxal phosphate (fundic enzyme has not been studied under these conditions). The findings so far supported the notion that pyloric and fetal histidine decarboxylase are a common enzyme.

The enzyme preparations employed in the heat inactivation study had been purified by salt fractionation, followed by gel filtration on Sephadex G-150. It was noted that the elution volume of pyloric and fetal histidine decarboxylase differed significantly. This finding, as well as other observations, suggested that pyloric and fetal enzyme may be manifestations of a single enzyme but representing different states of aggregation.



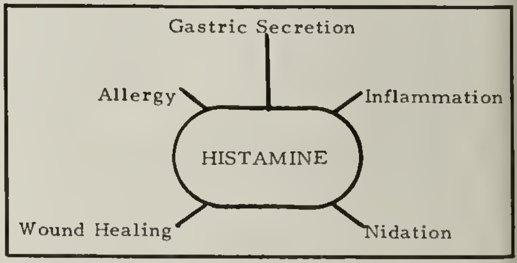
HISTIDINE

HISTAMINE

Dopa decarboxylase differed markedly in its sensitivity towards the inhibitors studied, such as toluenesulfonic acid hydrazide. The inhibitory potency of this compound was one hundredfold smaller with dopa decarboxylase than that for pyloric or fetal histidine decarboxylase. The latter two preparations were inhibited by α-methylhistidine but not by α-methyldopa. Conversely, α-methyldopa, but not α-methylhistidine readily inhibited dopa decarboxylase. Gel filtration permitted partial separation of dopa decarboxylase from pyloric and fetal histidine decarboxylase. A comparison of inhibitor effects indicated that fundic histidine decarboxylase was not affected by most inhibitors of dopa decarboxylase. Furthermore, partially purified fundic histidine decarboxylase preparations contained no measurable dopa decarboxylase.

These findings indicate that pyloric histidine decarboxylase, fundic histidine decarboxylase and dopa decarboxylase are discrete enzymes. On the other hand, pyloric and fetal histidine decarboxylases were indistinguishable by their catalytic characteristics; the two species differed, however, in their molecular radii.

The substantial differences of fundic and pyloric histidine decarboxylase invite speculation as to their role in gastric physiology. It is especially interesting to consider the physiological significance of the observation that norepinephrine inhibited pyloric but not the fundic histidine decarboxylase. Furthermore, it is the pyloric enzyme which is amenable to inhibition by synthetic compounds. Although calculations indicate that the pyloric enzyme is present in threefold excess, it is impossible at this time to evaluate the relative significance of these two enzymes in gastric histamine formation. Further work remains to be done in order to establish the effect that inhibitors of the gastric enzyme(s) may have on gastric secretion and the significance of these inhibitions on ulcer formation.



PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
Chili Beef	6.2	Vegetable Beef	5.0
Green Pea	6.9	Vegetable with Beef (Frozen)	5.4

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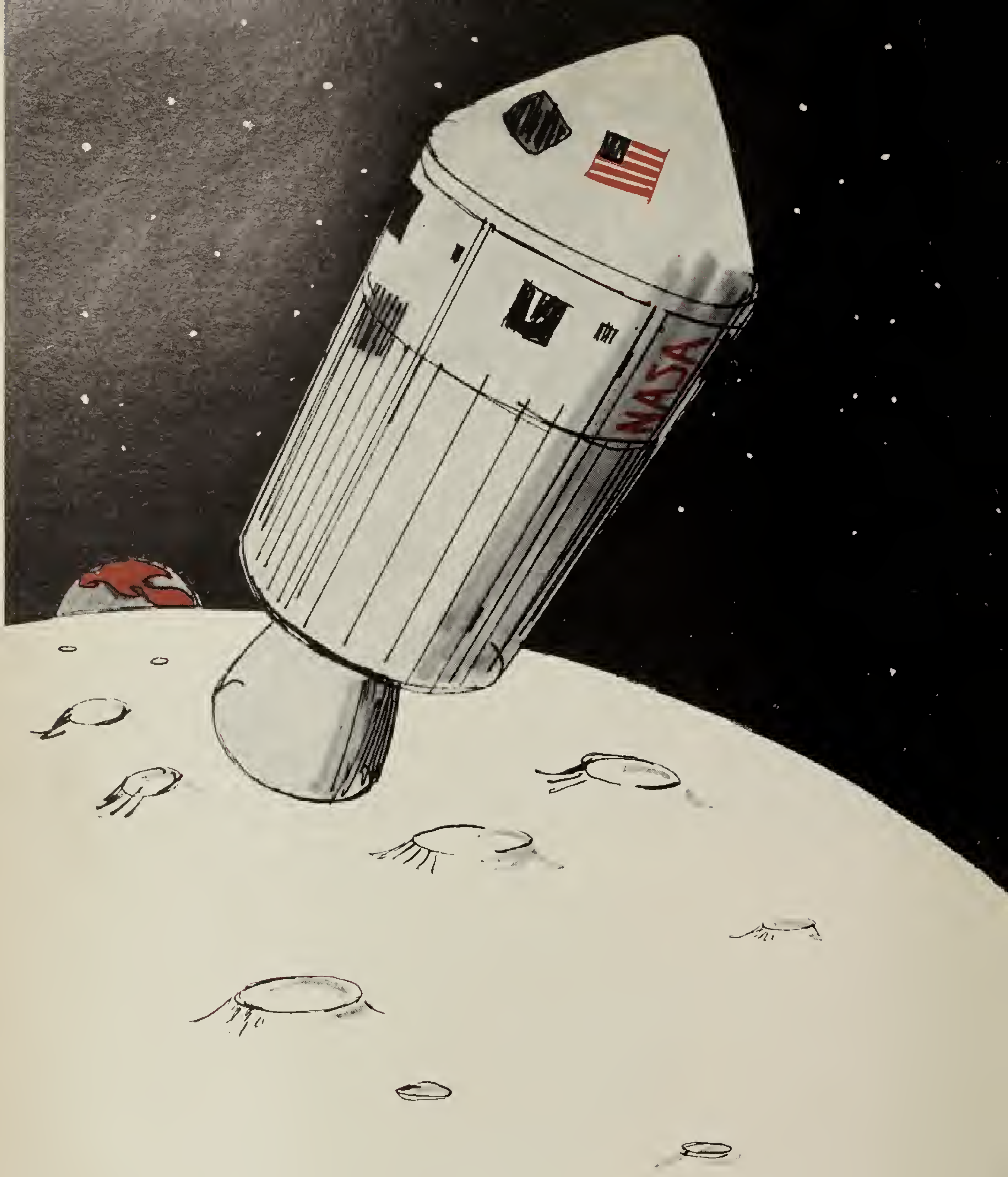

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TABLETS/LIQUID

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diphenoxylate hydrochloride .....2.5 mg.
(Warning: May be habit forming)
atropine sulfate ....0.025 mg.

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In diarrheas associated with:

- gastroenteritis
- acute infections
- functional hypermotility
- irritable bowel
- ileostomy
- drug-induced diarrhea

Warnings: Lomotil should be used with caution in patients taking barbiturates and, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Signs of accidental overdosage may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise. Respiratory depression and coma may occur with overdosage.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:

3-6 mo.	½ tsp.* t.i.d. (3 mg.)
6-12 mo.	½ tsp. q.i.d. (4 mg.)
1-2 yr.	½ tsp. 5 times daily (5 mg.)
2-5 yr.	1 tsp. t.i.d. (6 mg.)
5-8 yr.	1 tsp. q.i.d. (8 mg.)
8-12 yr.	1 tsp. 5 times daily (10 mg.)
Adults:	2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful

Maintenance dosage may be as low as one-fourth the initial daily dosage.

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Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

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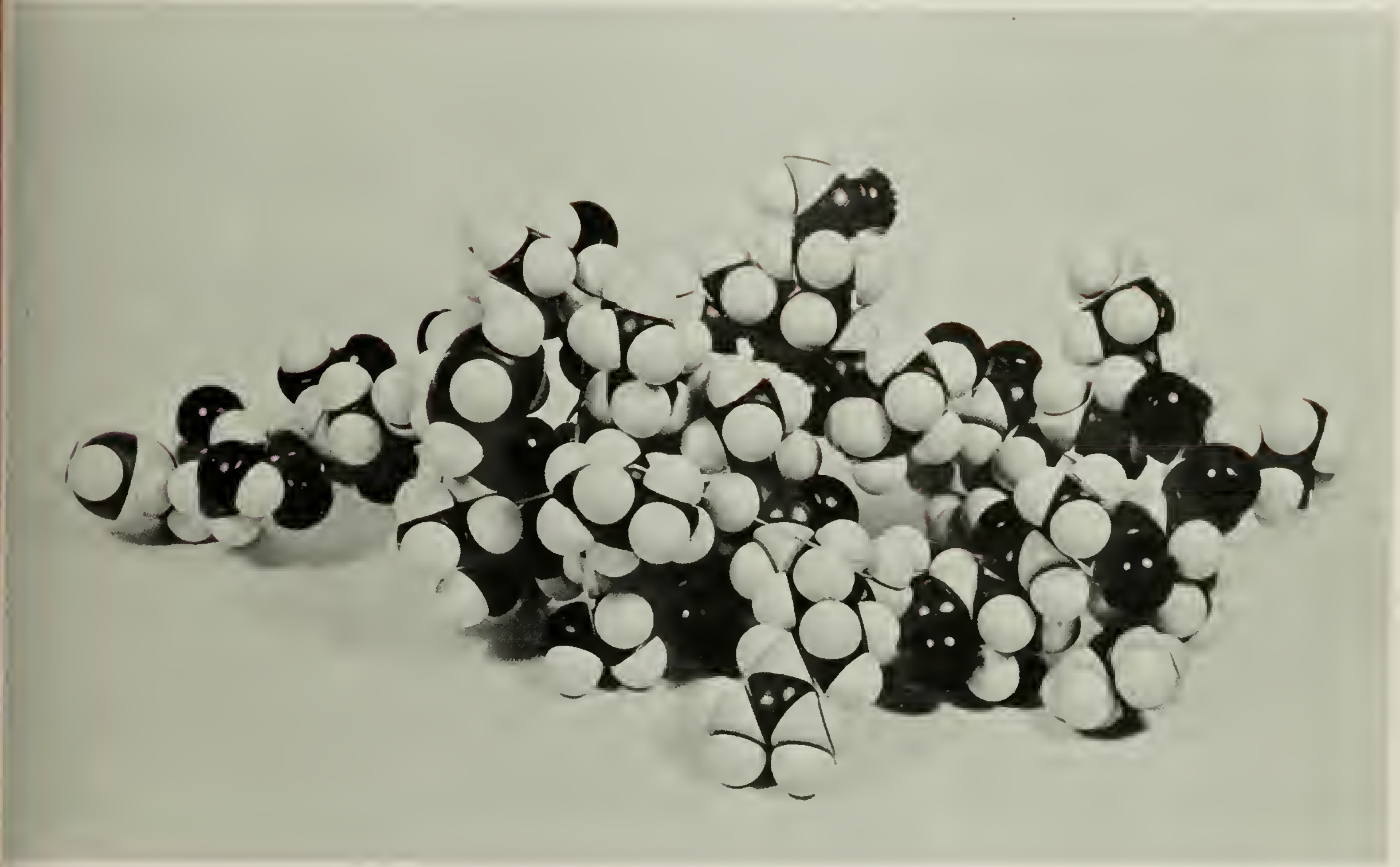

Molecular model *of secretin with the secondary structure believed adopted by Secretin in aqueous solutions. This is the conclusion we have drawn from the studies outlined in the paper inclosed.*

THE SYNTHESIS OF SECRETIN

A major scientific accomplishment was achieved in 1966 when E. R. Squibb & Sons, Inc. announced the total synthesis of the peptic hormones, secretin, as a result of research done by one of its scientists, Dr. Miklos Bodanszky of The Squibb Institute for Medical Research. Secretin is the only reliable tool in the diagnosis of cancer of the pancreas and serves as an adjunct in surgery of this organ.

The history surrounding the synthesis of secretin is an interesting one. In 1902, noted physiologists, William Maddoch Bayliss and Ernest H. Starling, discovered that an extract of the duodeno jejunal mucosa of vertebrates contains a principle which, when given intravenously, stimulates the secretion of pancreatic juice. They named this principle secretin and introduced the name and concept of "hormone" for such compounds which are the chemical messengers in physiological processes. Since that time, the usefulness of secretin for testing the function of the pancreas has been definitely established.

Methods for obtaining purified secretin from the natural source, hog's intestines, were later developed and perfected by Professor J. E. Jorpes and Dr. V. Mutt of the Karolinska Institute, Stockholm, Sweden, who prepared pure secretin of about 4,000 clinical units per milligram. This is several thousand times purer than preparations previously available. The biological activity is determined in experimental animals. It was demonstrated that about one clinical unit per kilogram of secretin, when injected into a human, closely equals the amount of the hormone physiologically delivered to the blood stream after a meal. Thus, about twenty micrograms per person will produce the physiological effect which illustrates the relatively high biological activity of this hormone. As raw material for the isolation of secretin, only the upper first meter of the hog duodenum is used and from it about three human doses (225–300 clinical units) of purified material can be obtained. Due to the difficulty encountered in separating secretin from other hormones, such as cholecystokinin and pancreozymin, contained in the starting material, the purified hormone has been available only in limited quantities for clinical and investigational use.

In 1962 Jorpes, Mutt and their associates reported that the purified secretin proved to be a polypeptide built up of eleven different amino acids and twenty-seven amino acid residues with proline, cystine, methionine, isoleucine, lysins, tyrosine and tryptophane lacking. In support of the structural elucidation by the Karolinska group, scientists at The Squibb Institute for Medical Research synthesized several peptides related to secretin and have succeeded in building up the polypeptide chain containing twenty-seven amino acids in a stepwise manner. The synthesis was started with the C-terminal amino acid (valine amide) and one amino acid added at a time. The nitrophenyl ester method and the stepwise strategy, a general procedure developed previously by Dr. Bodanszky for the synthesis of polypeptides, were employed for all the peptide bond-forming steps. This is the longest peptide chain built up in an entirely stepwise manner through isolated and well-defined intermediates.

The synthesis of secretin by combination of peptide fragments of the molecule has also been completed.

These syntheses offer a very significant economical advantage over the extraction process from intestines and, in addition, the hormone is obtained in high purity. Thus, the door is opened for an intensive study of several potential uses besides those already established. The classical biological activity of secretin has been well documented, namely, that of eliciting bicarbonate secretion by the pancreas and thus causing an alkaline condition in the intestines for maximal activity of the proteolytic enzymes trypsin and chymotrypsin. Prominent scientists and physicians believe that secretin has several other important effects which need further investigation. Among these are the inhibition of gastric secretion which might have application for patients with peptic ulcers, stimulation of the release of insulin, and stimulation of the Brunner glands, producing increased secretion of a mucose substance which coats the gastrointestinal tract.

Why
Can't things be the way they used to be?

Culver Pictu

You know. When the Negro "knew his place."
When students stayed in the classroom.
When poverty was kept off page one.
Ah, the good old days.
But who's fooling whom? Was it really a better world? Or just a quieter one? A few years ago it was easy to hide from the evils around us. To turn our backs and pretend it really wasn't so.
But God knows, it was. All that our modern communication system has done is bring it all out into the open. And about time.
The fact is, God has probably been much too patient with our world. "Love your neighbor," He told us long ago. Not enough of us were listening and that's what today's turmoil is all about.
And think about this: maybe—just maybe—God put us here right now because we're the ones who can start setting things straight.

The British Scene

Prepared by George Teeling-Smith, Director
Office of Health Economics, London, England

To understand the British scene, I think it is important first to realize that we have a much greater tradition of informality in our national institutions than the United States. Our Parliament, for example, has no written constitution. My own organization, the Office of Health Economics, although it functions quite independently of our sponsors, the Association of the British Pharmaceutical Industry, has no formal status or independent existence. Similarly, a great deal of our pharmaceutical industry's relationship with government, both in its role as regulating body and as a major customer through the National Health Service, has been on an informal and voluntary basis. This has had enormous advantages. However, I think it sometimes makes it difficult for countries such as yours, with your written constitution and your experience of rather formal relationships between industry and organizations such as the Federal Trade Commission and the Food and Drug Administration, to understand our position.

On the subject of drug safety, for example, we have, since the thalidomide tragedy, operated a voluntary scheme in co-operation with a government appointed committee under the chairmanship of Sir Derrick Dunlop. This body, on the basis of the evidence presented to it, gives approval for companies to start clinical trials and to market new products. It also monitors reports of adverse reactions. This has functioned very well with the sole exception that one or two very un-English gentlemen, selling pharmaceuticals from abroad, have taken advantage of its voluntary nature. For this reason, and I suppose to some extent for administrative tidiness, this voluntary scheme is now to be replaced by statutory controls under the new Medicines Act, which was passed in October, 1968. This is a very comprehensive piece of legislation which also consolidates and brings up to date a multitude of independent acts and regulations which till now have controlled individual aspects of manufacture, distribution and sale of medicines.

It would be useful, I think, to make three points about the 1968 Medicines Act. First, it created a Medicines Commission with functions essentially similar to your FDA. This will supervise new pharmaceutical introductions and will regulate the advertising and sale of products already on the market. Second, by its nature, the act is a piece of legislation which gives extremely wide enabling powers to the government, which would allow them by regulation to impose very stringent and extensive controls. This inevitably caused grave suspicion in the industry because if these powers were to be used unimaginatively they could be extremely damaging. However, I think we accept that these wide enabling powers have been taken in good faith so that the act can be flexible and will not need subsequent amendment to cope with every minor change in medical and pharmaceutical practice. We are very hopeful that the new Medicines Act will be operated with the same degree of understanding and mutual goodwill that has characterised the industry's relationship with the Dunlop Committee, and indeed with government as a whole in respect of previous safety regulations such as those which controlled the use of vaccines and antibiotics.

My third point on the Medicines Act is simply that we are still awaiting any developments since it was passed six months ago. It was only this week that —to our great pleasure—Sir Derrick Dunlop was announced as the first chairman of the Medicines Commission. Consultations have not yet begun on the rest of the membership or on the drafting of the detailed regulations under the act. Because of this, it is very difficult to be more specific about how the act will operate. The only conclusion we can certainly draw is that the Department of Health and Social Security is suffering badly from our Prime Minister's recent diktat that there was to be no further increase in the very large volume of man-power already employed unproductively in government administration!

I would like to turn briefly now to three matters which were raised by the Sainsbury Committee which in 1967 reported on our pharmaceutical industry's relationship with the National Health Service. The first is the question of brand names, which the committee recommended should be abolished for new pharmaceutical products. This recommendation, which incidentally has not been accepted by government, was widely misunderstood. It was not a recommendation in favour of "generic prescribing"; in fact the committee specifically recommended that doctors should continue to be free to prescribe a specific manufacturer's preparation and that the pharmacist should have no power to substitute a "chemical equivalent" from another manufacturer. By implication, the Health Service would have continued to reimburse the price of each manufacturer's product if it was specifically prescribed, regardless of whether there were cheaper "chemical equivalents." The committee, in our view mistakenly, felt that a doctor should prescribe "aspirin; XYZ Laboratories" rather than "Paingo"—if that happened to be XYZ Laboratories' brand name! As I say, the government has accepted that the brand name approach is preferable.

One argument against brand names, of course, is that they add to the cost of prescribing because an "open" prescription allows—and indeed, under the NHS in Britain, requires—the cheapest "chemical equivalent" to be dispensed. In fact, the amount that more expensive brands add to the total NHS prescription bill is very small—fluctuating between 1 or 2 per cent according to the number of branded products that have recently expired from patent. I understand from the HEW Task Force reports that the figure is slightly higher in the U.S., but still only a very small percentage of the total.

I think the problem of differently priced "chemical equivalents" is one of the most difficult to judge rationally. Certainly in Britain, however, our Department of Health accepts that there may be good reasons to justify price differences between different manufacturers, and they are prepared to continue giving full reimbursement for more expensive brands provided that their price has been approved under our price regulation scheme.

Another argument against brand names leads me to the second matter I wanted to mention—namely sales promotion. The Sainsbury Committee concluded that selling under brand names added to the total cost of sales promotion. This argument, which is in any case debatable, was clearly not an adequate reason for abandoning all the advantages of the brand name system. It did, however, focus our government's attention on the supposed wastefulness of sales promotion. Everyone, of course, would like to see more efficient methods of marketing; but we have argued strongly that arbitrary restrictions on promotion expenditure, which have been suggested by the British government, would not necessarily promote efficiency and would certainly inhibit desirable competition and the total process of pharmaceutical innovation.

Although rigid restrictions on total promotion expenditure are not a practical proposition, the Association of the British Pharmaceutical Industry has for the past ten years operated a Code of Practice which sets standards for promotion to doctors. This code is widely publicized. Any complaints alleging breaches of it are investigated by a committee under the chairmanship of Sir Joseph Moloney Q.C., who recently chaired a government committee on consumer protection. Thus, the industry accepts that the content of its sales promotion must never be misleading, but still feels that its volume must be a matter for the judgment of the individual company.

My third point concerns the all-important function of patents in pharmaceutical innovation. The Sainsbury Committee doubted—as does the U.S. Task Force—whether the present length of patent protection is desirable. However, fortunately, at the time that Sainsbury reported, another government committee—the Banks Committee—was reviewing the patent law in Britain generally. The Sainsbury Committee, therefore, remitted the whole question to the Banks Committee. What indications we have suggest that the latter is well aware of the arguments in favour of long and strong patent protection for pharmaceuticals; they have received the industry's representations sympathetically and we hope that their recommendations will be favourable.

The particular problems over pharmaceutical patents in Britain center on two Sections of the current 1948 Patents Act. Section 41 allows for the automatic grant of compulsory licenses for patents on foods and medicines unless there is "good reason" for withholding them. Section 46 provides for the abrogation of a patentee's rights by the government "for the services of the crown". The former is a continual threat and irritation, although in practice relatively few applications for compulsory licenses have been successfully pursued. The latter is a very powerful bargaining weapon by government in price negotiations with companies. As I will describe, it was used by a Conservative government in 1961 to buy tetracyclines and other products for British hospitals from unlicensed suppliers. Since then the present Labour government has altered the law so that the same powers could now be used to supply the very much larger part of the market accounted for by general practitioners' prescriptions.

This brings me, appropriately, to the most important topic of this paper—the question of prices and profits on pharmaceutical supplies for the NHS. This is a problem which has overshadowed all other aspects of the industry's relationship with the government in Britain. It is obviously crucial to any discussion of the economics of pharmaceutical innovation.

First, let me briefly review the history. From the earliest days of the Health Service, in the early 1950s, there was disquiet about the special situation in which doctors prescribed whatever they believed best for their patients and the state automatically met the cost—at first in full, and then (in an effort to stem rising costs) less a nominal payment by the patient. This was originally about ten cents per prescription form and has since been increased to thirty cents per item on the form. It was assumed that the intervention of the state would create an atmosphere in which there was likely to be excessive consumption of medicines and in which suppliers would be tempted to charge excessive prices. We now know that neither of these assumptions was justified. However, the steadily rising cost of the pharmaceutical service (taken in isolation without considering the equally steady rise in total health service expenditure) lent support to these fears. As a consequence, in 1958 a voluntary price agreement was reached between the Association of the British Pharmaceutical Industry and the Ministry of Health. This initial scheme pegged prices in the U.K. to the prices charged in overseas markets, on the assumption that price competition elsewhere would ensure that overseas prices were "reasonable."

Not surprisingly, this resulted in practically no reduction in price levels in the U.K., which were in fact already generally below those overseas. At the same time the Kefauver hearings, although in my view not based on very sound economic theory, made it abundantly clear that classical price competition for patented prescription medicines was no more effective in a free market than under a national health scheme. As a result of this revelation, and because the politicians had not achieved the price reduction they had expected from the first scheme, a revised voluntary price regulation scheme was agreed in 1961. This was negotiated against a crescendo of public disquiet about the industry's prices and profits, and consequently introduced the principle that, in addition to prices being no higher than overseas, the profits earned on sales of NHS products in Britain should be examined to ensure that they were not "excessive."

This immediately introduced two complications. First, the international structure of many companies made it extremely difficult to identify the profits actually earned on sales of NHS products in Britain. Second, it became obvious that no criteria existed on which to judge the reasonableness of the profits either for the industry as a whole or—more particularly—for individual companies.

These difficulties led immediately to the one outstanding open conflict which has arisen between the industry and government. In prolonged discussions with the Ministry of Health during the early part of 1961, a number of manufacturers were continuing to produce facts and arguments to justify the prices of their patented products in what we now recognize to be an intensely complex economic situation. Meantime, however, some enterprising hospital pharmacists had started to obtain supplies of chemically identical products at much lower prices from unlicensed manufacturers in countries such as Italy, which did not grant pharmaceutical patents. The then Minister of Health, Enoch Powell, an extreme right-wing Conservative, was faced with a dilemma. He could either instruct the hospital pharmacists to cease breaking the law, as they were doing by buying these imports from unlicensed sources. Alternatively, according to his legal advisers, he could use Section 46 of the 1948 Patents Act to authorize importation of these continental unlicensed copy products "for the services of the crown". He took the view, in the political climate of the day which was almost universally hostile to the pharmaceutical manufacturers, that he should follow the latter course. He announced his decision to do so in May of 1961 and imports of these unlicensed products started the following year. These imports were used only to supply the hospital service. Although the dispute with the original patent holders had been primarily over the priced charged to the pharmaceutical service, for supplies outside hospital, the Patents Act did not, in the opinion of his legal advisers, authorise the Minister of Health to use Section 46 to obtain supplies for this larger part of the market even had he wished to do so. As I mentioned, the law has subsequently been amended to reverse this situation.

Thus, in this encounter, Enoch Powell, arch-priest of the right-wing free marketeer philosophy, took the essentially Galbraithian view that the pharmaceutical companies concerned were adopting a narrow self-interested pricing policy which was unacceptable in the context of the NHS. There is no doubt that this dispute did lasting damage on both sides to the government-industry relationship. The Ministry regarded the companies' protracted discussions on prices as deliberately obstructive behaviour, intended to postpone reaching a settlement on "reasonable" prices; the industry regarded the Minister's use of Section 46 as an impatient and hostile gesture calculated to undermine the industry's confidence in government's policies towards it. The suspicions on both sides remain as a major obstacle to re-establishing mutual goodwill. The companies concerned did, however, continue negotiations on prices, and by 1965 the ministry was able to announce that in the light of what they regarded as a satisfactory price settlement for supplies to the NHS as a whole, they would discontinue importations under Section 46.

It is an interesting reflection of the complexity of the situation which we face that six years later, in 1967, the report of the Sainsbury Committee was able to identify accurately the two complications which had led to this conflict in 1961, but was still quite unable to give any specific guidance on how to judge the reasonableness of the industry's profits.

The Sainsbury Committee made three recommendations of direct relevance to the pricing question. The first was that companies should provide an annual financial return to the Ministry of Health, showing in prescribed form the financial results of its pharmaceutical business. Secondly, it recommended that the problems associated with financial transfers and transactions with associated companies should be resolved. Thirdly, it recommended that companies should submit "standard cost returns" showing proposed prices and costs initially for new products and eventually for major products already on the market. This third recommendation was strongly opposed by the industry as being inappropriate. The Association of the British Pharmaceutical Industry contended that the operating ratios of a pharmaceutical company—with its heavy dependence on innovation—could only properly be reviewed as a whole rather than in terms of individual products. The Ministry of Health was also reluctant to implement this recommendation because of the large numbers of additional civil servants whom it was envisaged would be needed to scrutinize intelligently these individual product cost returns. This recommendation has, therefore, for the present been rejected while the government and industry continue to discuss the other two in the context of a further revision of the voluntary price regulation scheme. The outstanding problem, which discussion and negotiation cannot at present resolve, is how to establish criteria on which the reasonableness of a company's profits can sensibly be discussed with the Department of Health.*

There is little doubt, in both the U.K. and the U.S., that the industry's return on capital employed is higher than the average for industry as a whole and the difference is probably five or six percentage points. We do not, however, know how much of this difference arises as a result of the special accounting circumstances of the industry: for example, in Britain three-quarters of the industry consists of subsidiary companies and these are often under-capitalized. More importantly, we do not know what level of premium profit should be justified by the performance of the industry. Factors to be taken into account in this regard include, for example, the industry's good record of labour relations, its outstanding record of innovation and is highly integrated and efficient international structure. All of these factor wosuld be expected to contribute to a very much higher profit than that earned by an industry such as shipbuilding in Britain, which has an extremely poor record on each of these counts. However, high profits are always suspect, and there are temptations in all countries for politicians to seek "political trophies" in the form of pharmaceutical price reductions.

It is beyond the scope of this paper to discuss the various economic assessments of profitability in the industry. It is worth recording, however, that in both Britain and the United States there are sharp differences of opinion on the subject between economists of considerable stature. Generally, those chosen by the industry to study the subject find the profits fully justified, while those retained by government conclude that they are excessive.

It is particularly important to realize that restrictions on profit in Britain cannot be justified by any special circumstances of the NHS. It is not a "soft market" encouraging high prices; if anything the profitability of the industry appears to be higher in countries with a "free market" such as the United States. The Health Service, using its powers as a monopsonic "customer," can exert much more effective pressures on prices than can individual patients. It can also exert more pressure—as it does—on prescribers to avoid expensive medicines. Our government carries out an extensive and regular publicity program—using frequent glossy colourful mailings—to encourage doctors to prescribe cheaply. Medical Officers from the Department of Health visit doctors who persistently prescribe expensively and there are financial sanctions for those who remain intransigent. In this situation, if restrictions on profitability were justifiable in Britain they should logically be copied in other countries.

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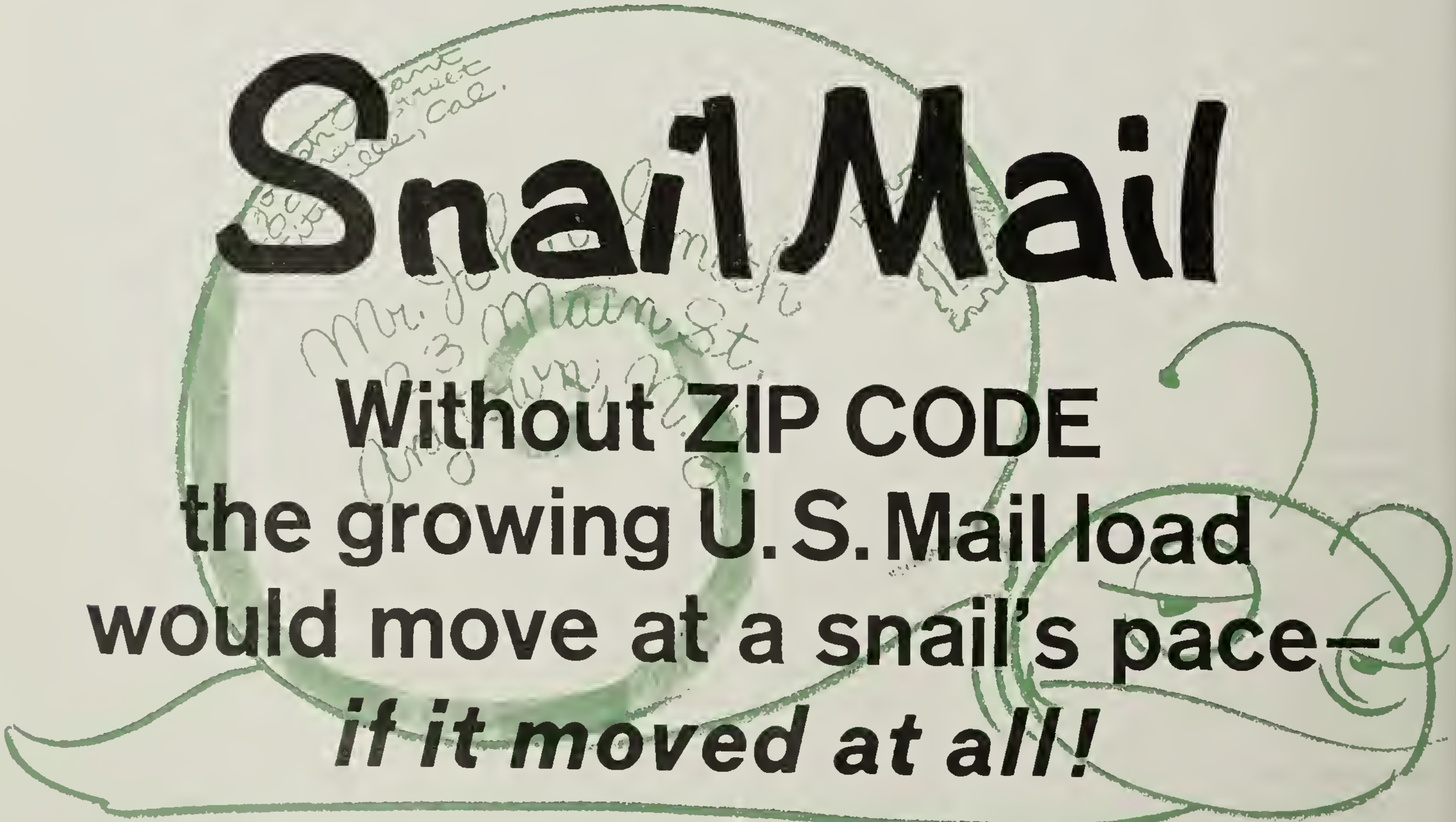
*The former Ministry of Health became part of the new Department of Health and Social Security in November 1968; hence the use of dual titles in this paper.

One can summarize the British industry's attitude as follows. It believes its present profitability to be reasonable and echoes one of the Sainsbury Committee's conclusions, that "it has in some cases been less than might be expected". It has found substantial academic support in questioning the committee's more general conclusion that its overall profits had been excessive to the extent of several million pounds over the three year period from 1963 to 1965. It is ready, if possible, under a new voluntary price regulation scheme to find a way of sharing financial information with the Department of Health so that government can satisfy itself and, in turn, assure the public that pharmaceutical prices and profits are reasonable. Negotiations to achieve this objective have been in progress for more than a year. Some companies fear, however, that the sharing of information will lead to further automatic downward pressure on prices. This could be based on more detailed information than previously, but still on no more rational economic theory. The greatest danger is that it could have far reaching international repercussions.

The industry is particularly concerned over the possible "ratchet effect" of maximum profits limited by price negotiation on the one hand and artificially stimulated price competition below this "ceiling" on the other. The combined effect of these two, taken in conjunction, could drastically reduce the industry's profits. In fact, price reductions stimulated in part by these two mechanisms have already resulted in savings to the Health Service in excess of $25 million a year since the period studied by the Sainsbury Committee.

The real problem so far has been the lack of a generally accepted economic theory of innovation, coupled with a mutual lack of confidence between the government and industry which dates back particularly to the use of Section 46 of the Patents Act in 1961. Returning to the point which I made initially, we have a tradition of informality and compromise in our relations between government and industry. We believe this is best suited to the British temperament, but it must depend on mutual trust and respect which up till now has been lacking.

In the past, government—and the public at large—suspected that the pharmaceutical industry was profiteering out of human sickness. Industry, on the other hand, believed that the attitudes and proposed policies of government were inimical to its further growth. We have now reached a situation where the public in Britain has a more or less open mind on these matters, and on balance government is probably more suspect than industry. For example, nine out of ten people in a recent survey in Britain rejected the idea that the government should interfere with doctors' prescribing freedom in the interests of economy. Government is also now aware of its responsibility to the community in maintaining the prosperity and innovating record of the pharmaceutical industry. Out of this gradually changing situation, we hope to see the emergence of a period in which confidence is re-established and mutually acceptable economic criteria are developed on which to judge the industry's performance.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PENNSYLVANIA MEDICINE cardiovascular briefs

Angina Pectoris

Herbert Unterberger, M.D., Associate Professor of Medicine at the Woman's Medical College of Pennsylvania, Philadelphia, Pennsylvania, is questioned by William G. Leaman, Jr., M.D.

What is the cause of angina pectoris?

Myocardial ischemia. The area involved may be minute or include the whole ventricle. In either instance, the patient may experience the same degree of chest pain or discomfort.

Is this condition the result of an alteration in coronary blood flow?

Not necessarily. Many other aspects of the situation should be considered, such as cardiac rate, metabolism, neurogenic background, age, etc.

What, then, causes chest pain of the anginal type?

The unsatisfactory relationship between the oxygen demands of the myocardium and the supply of O_2 available.

Do nitrites bring about coronary vasodilatation?

Recent research has suggested that this may be true in normal subjects although it does not apply to patients with coronary artery disease.

How, then, is relief obtained following the usual sublinguinal dose of glyceryl trinitrate?

Nitroglycerin (glyceryl trinitrate) brings about a pooling of the blood in the peripheral venous and arterial systems and thus decreases the oxygen demands of the myocardium.

If the patient complains of chest pain following exertion, how do you prescribe nitroglycerin?

After an initial test dose (in recumbency), the drug should be used p.r.n. for chest pain. In addition, the patient should be urged to take a tablet sublingually before undertaking an effort that has previously caused chest discomfort. We must remember that nitroglycerin does not give prolonged protection since the larger coronary vessels do not dilate following its use. However, we always hope that this prophylactic measure may increase the collateral vessels in the coronary tree. To sum up our reasons for using the drug in this manner, we believe it gives a beneficial result by its effect on the peripheral arterial and venous systems, by lowering the blood pressure and by reducing the need of the heart for oxygen.

What drugs do you use routinely in the management of angina pectoris?

Nitroglycerin, pentaerythritol tetranitrate (Peritrate) and, occasionally, papaverine hydrochloride.

What do you think of propranolol therapy for patients suffering from coronary disease and angina?

Propranolol (a beta-receptor blocking agent) has recently been suggested for angina pectoris. Its action here is mainly to prevent the increase in myocardial oxygen requirements brought about by the stimulation of the cardiac sympathetic nerves during exertion. This delays the onset of ischemic pain by reducing myocardial oxygen requirements. Propranolol will reduce heart rate, lower arterial blood pressure, lower cardiac output and diminish the contractile state of the heart. This drug is a new therapeutic agent and, so far, we are not certain we know the entire story. I do not believe, therefore, that this preparation should be used when dealing with advanced cardiac disease. Remember, these patients depend on an increased adrenergic stimulation of their failing hearts.

Does electric stimulation of the carotid sinus nerves aid refractory angina pectoris?

This method used in the therapy of angina consists of surgical attachment of bipolar electrodes to both carotid sinus nerves. They are connected to a receiving unit buried in the subcutaneous tissue of the anterior chest wall. Placed above is a receiver connected to an induction coil and a battery. The patient may then switch on the system when he feels the onset of angina. Stimulation of the carotid sinus nerve results in a reflex diminution of adrenergic discharges. In this manner arteriolar dilatation is produced, myocardial contractility is lessened and the heart rate is slowed. Consequently, myocardial oxygen requirements are less. It is necessary to stimulate the carotid-sinus nerves for only a short time in patients who have advanced heart disease. This method is only in the experimental stage. However, it does not disturb the cardiac balance as beta-adrenergic blocking agents often do.

Are more extensive surgical measures indicated in correcting ischemia and decreasing the severity of angina?

The surgeons have been using the implantation of the internal mammary arteries into the myocardium. While this is, admittedly, a complicated procedure, the operation has proved successful in some instances of intractable angina.

William G. Leaman, Jr., M.D., edited this Brief for the Council on Education and Science, in cooperation with the Pennsylvania Heart Association.

PENNSYLVANIA MEDICINE **cancer forum**

Safeguard Against Oral Cancer

Should a cytologic smear be part of the oral examination?

The oral cancer smear can be an extremely useful adjunct in the diagnosis of early cancer of the buccal cavity. It should be used whenever a lesion is found. It is specially important when the lesion is so insignificant that biopsy is not considered. If a positive smear, confirmed by biopsy, is found under these circumstances, the neoplasm is probably early.

Can it replace the biopsy?

Absolutely Not! The biopsy remains the definitive method of diagnosing oral cancer. The smear is an adjunct to the biopsy. If the lesion makes you suspicious, a biopsy should be done without delay.

What equipment is needed?

The necessary materials are few and simple: microscope slides, wooden tongue depressors and a cytologic fixative. This latter is usually supplied by the pathology laboratory that interprets your smears. You can make your own by mixing together 95% alcohol and ether, equal parts.

How is an oral smear made?

Expose the area to be sampled and, with the tongue depressor or similar instrument, scrape the lesion with a fair degree of pressure. It is helpful to saturate the scraper before use by soaking it in water. After scraping, you will have a mixture of surface cells and oral secretions. Spread this evenly on a microscope slide, using a circular motion. Do not "scrub" it on the slide. Immediately, before the specimen dries, cover it with fixative solution. Permitting the specimen to dry before fixation distorts the cells and makes the pathologist's work harder. Make a second smear in a similar manner.

Suppose I have no time to make smears?

You should then delegate the task to your trained office aide. She can quickly be taught the technic of making smears and then all you need do is show her the area you want sampled. Recent legislation specifically permits the dental hygienist to take oral cytology smears.

Who interprets the smears?

No practitioner should attempt to read these smears without special training. The interpretation of cytologic smears is an art that requires study and long experience. Most communities of moderate to large size have cytology laboratories. A phone call is all that is needed to bring prompt service. If no facilities are available locally, there are many approved laboratories that offer their services by mail to physicians and dentists regardless of the distance.

But isn't a biopsy better than a smear?

It is better under two conditions. Number one, if you do a biopsy and number two, if it is positive. The smear has its greatest usefulness in exposing early cancer in those lesions that look so benign that you hardly give them a second thought, much less biopsy them. It is also useful, taken at the same time as biopsy, in questioning a negative biopsy. If suspicious cells are seen on the smear, a negative biopsy should not be accepted without further study.

The point is that both smear and biopsy are important tools in the diagnosis of early oral cancer. We cannot afford to neglect any technic to help control deaths from oral cancer.

CANCER FORUM — presented cooperatively by the PMS Council on Education and Science, The Pennsylvania and Philadelphia Divisions of the American Cancer Society, and the Cancer Control Section, Pennsylvania Department of Health. The Cancer Forum is edited by Roland A. Loeb, M.D., Lancaster.

once-popular treatment for back pains
as to have the seventh son of a seventh son
and or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

or headache, a sovereign remedy was
wear a snakeskin round one's head.

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Tuckahoe, N.Y.

Contraindications: Edema, danger of cardiac decompensation; history or symptoms of peptic ulcer; renal, hepatic or cardiac damage; history of drug allergy; history of blood dyscrasia. The drug should not be given when the patient is senile or when other potent drugs are given concurrently. Large doses of the alka formulation are contraindicated in glaucoma.

Warning: If coumarin-type anticoagulants are given simultaneously, watch for excessive increase in prothrombin time. Instances of severe bleeding have occurred. Persistent or severe dyspepsia may indicate peptic ulcer; perform upper gastrointestinal x-ray diagnostic tests if drug is continued. Pyrazole compounds may potentiate the pharmacologic action of sulfonylurea, sulfonamide-type agents and insulin. Carefully observe patients receiving such therapy. Use with caution in the first trimester of pregnancy and in patients with thyroid disease.

Precautions: Before prescribing, carefully select patients, avoiding those responsive to routine measures as well as contraindicated patients. Obtain a detailed history and a complete physical and laboratory examination, including a blood count. Patients should not exceed recommended dosage, should be closely supervised and should be warned to discontinue the drug and report immediately if fever, sore throat, or mouth lesions (symptoms of blood dyscrasia), sudden weight gain (water retention), skin reactions; black or tarry stools or other evidence of intestinal hemorrhage occur. Make complete blood counts at weekly intervals during early therapy and at 2-week intervals thereafter. Discontinue the drug immediately and institute countermeasures if the white count changes significantly, granulocytes decrease, or immature forms appear. Use greater care in the elderly and in hypertensives.

Adverse Reactions: The more common are nausea and edema. Swelling of the ankles or face ma minimized by withholding dietary salt, reduction in dosage or use o diuretics. In elderly patients and in those with hypertension the dr should be discontinued with the a pearance of edema. The drug has been associated with peptic ulcer and may reactivate a latent peptic ulcer. The patient should be instructed to take doses immediate before or after meals or with milk minimize gastric upset. Drug rash occasionally occurs. If it does, promptly discontinue the drug. Agranulocytosis, exfoliative derm

Sandy sails again! After an arthritic flare-up.

His rheumatoid arthritis flared out of aspirin control. It meant weeks of pain, stiffness, swelling and tenderness...and a lot of sun and wind that somebody else took advantage of.

Next time, after aspirin, consider Butazolidin alka:
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Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings and contraindications. Read the prescribing information. It's summarized below.

, Stevens-Johnson syndrome,
ll's syndrome (toxic necrotizing
dermolysis), or a generalized
rgic reaction similar to serum
ness may occur and require
manent withdrawal of medica-
. Agranulocytosis can occur
denly in spite of regular, repeated
mal white counts. Stomatitis
l, rarely, salivary gland enlarge-
nt may require cessation of treat-
nt. Such patients should not
eive subsequent courses of the
g. Vomiting, vertigo and languor
y occur. Leukemia and leukemoid
ctions have been reported. While
definitely attributable to the
g, a causal relationship cannot
be excluded. Thrombocytopenic purpura and aplastic anemia may occur. Confusional states, agitation, headache, blurred vision, optic neuritis and transient hearing loss have been reported, as have hyperglycemia, hepatitis, jaundice, hypersensitivity angiitis, pericarditis and several cases of anuria, glomerulonephritis and hematuria. With long-term use, reversible thyroid hyperplasia may occur infrequently. Moderate lowering of the red cell count due to hemodilution may occur.

Dosage in Rheumatoid Arthritis: Initial: 3 to 6 capsules daily in 3 or 4 equal doses. Trial period: 1 week. Maintenance dosage should not exceed 4 capsules daily; response is often achieved with 1 or 2 capsules daily. In selecting the appropriate dosage in any specific case, consideration should be given to the patient's weight, general health, age and any other factors influencing drug response. (B)46-070-C

For complete details, please see full prescribing information.

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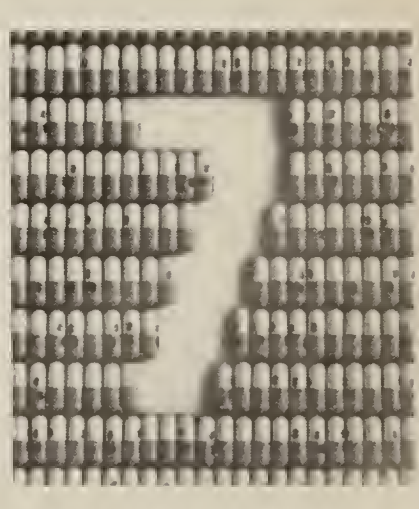

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Mellaril®
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effective in mixed anxiety-depression and in moderate to severe anxiety

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

SANDOZ PHARMACEUTICALS, HANOVER, N.J. SANDOZ 69-384

PENNSYLVANIA MEDICINE obituaries

○ Indicates membership in the Pennsylvania Medical Society at time of death.

Joseph L. Candido, Philadelphia; Temple University Medical School, 1921; age 72; died September 18, 1969. He had practiced medicine in the Germantown area for fifty years, and was a veteran of World War I. Survivors include his wife, a son, a daughter, a brother and six sisters.

Richard R. Costanza, Aliquippa; University of Pittsburgh School of Medicine, 1954; age 41; died September 24, 1969. He was chief anesthesiologist at St. Joseph Hospital. Survivors are his wife, two daughters, his parents, a brother and a sister.

Nathaniel S. Duff, Philadelphia; Temple University School of Medicine, 1925; age 81; died September 30, 1969. He had received the national Tuskegee Institute Alumni Award in 1955. Surviving are his wife, a son, a sister and a brother.

Calvin C. Fox, Philadelphia; Jefferson Medical College, 1918; age 77; died September 29, 1969. He was a member of the surgical staff at Jefferson Hospital for forty years and occupied the chair of laryngology. He is survived by two daughters.

Maurice Muschat, Brooklyn, N. Y.; University of Heidelberg, Germany, 1923; age 71; died October 1, 1969. He was a founding member of the American Board of Urology, and was chief of urology at Albert Einstein Medical Center, Philadelphia until his retirement in 1961. At the time of he death he was the New York state representative for the AMA in its department of graduate medicine.

James F. Tompkins, Philadelphia; Hahnemann Medical College, 1915; age 86; died June 4, 1969. He was a veteran of World War I. No survivors are listed.

James M. Torrence, St. Marys; Jefferson Medical College, 1913; age 81; died July 15, 1969. He was a veteran of World War I. No survivors are listed.

John M. Warren, Emsworth; Loyola University School of Medicine, 1924; age 73; died September 14, 1969. He served with the Army Signal Corps during World War I. He was a member of the American College of Surgeons. Survivors are his wife, five sons, including Jeffrey L. Warren, M.D. of Appleton, Wis., a sister and two brothers.

Mary M. Troll, Cherokee, Iowa; Yale University School of Medicine, 1936; age 58; died September 2, 1969. Fomerly of Sewickley, Dr. Troll had been for the past six years chief pathologist of the Cherokee Mental Health Institute. She was a member of the American College of Pathologists and the American College of Clinical Pathologists. She is survived by her husband, James M. Troll, M.D.

○ **Jesse L. Amshel,** Pittsburgh; Jefferson Medical College 1920; age 74; died November 3, 1969. He had been active in the practice of pediatrics since 1924, and was at his office at the time of his death. He was active in his support of the Western Pennsylvania School for Blind Children and the Allegheny County Child Health Clinic. Surviving are his wife, a son, Albert L. Amshel, M.D., and a brother.

○ **Jesse W. Beeghley,** Philadelphia; Jefferson Medical College, 1926; age 73; died November 11, 1969. Surviving are his wife, a daughter, a son and his stepmother.

○ **Moses Behrend,** Philadelphia, University of Pennsylvania School of Medicine, 1899; age 92; died November 15, 1969. He was the oldest living past president of the Pennsylvania and Philadelphia County Medical Societies, and was in the active practice of surgery until his nintieth birthday, when he retired. He was a member of the American and International College of Surgeons. Surviving are his son, Albert Behrend, M.D., and two daughters.

○ **David L. Bucher,** New Providence; Hahnemann Medical College, 1955; age 42; died November 12, 1969. His wife preceded him in death. He is survived by his parents, a sister and two brothers.

○ **J. Stratton Carpenter,** Pottsville, University of Pennsylvania School of Medicine, 1913; age 82; died October 14, 1969. The son of a doctor he was the fourth generation of his family to practice medicine in Pottsville where he served for over fifty years. Survivors include three sons, a daughter, and his brother, Chapin Carpenter, M.D., Philadelphia.

○ **Joseph P. Dobo,** Hyattsville, Md.; Medical University of Clus, Rumania, 1920; age 74; died September 9, 1969. He is survived by a daughter.

○ **George J. Feldstein,** Pittsburgh; Jefferson Medical College, 1906; age 86; died November 14, 1969. He was the first chief of pediatrics at Montefiore Hospital. He is survived by two sisters.

○ **William R. Gilmour,** Philadelphia, University of Pennsylvania School of Medicine, 1919; age 78; died October 27, 1969. He was a fellow of the American College of Surgeons and had practiced for over fifty years. He is survived by two sons.

○ **Lewis K. Hoberman,** Philadelphia; Jefferson Medical College, 1929; age 64; died November 17, 1969. He was associate professor of obstetrics and gynecology at Temple University School of Medicine, and in 1968 received the Christian R. and Mary Lindback Foundation Award for Distinguished Teaching. He is survived by his wife, two sons, a daughter, two brothers and three sisters.

○ **Alvin Wilcox Howland,** Philadelphia; University of Michigan School of Medicine, 1929; age 67; died October 26, 1967 en route to a medical seminar in Greece. He was an eye surgeon for more than thirty years, and formerly taught eye surgery at the University of Pennsylvania Graduate Medical School. He is survived by his wife and three daughters.

○ **Maxwell B. Kremens,** Philadelphia; Jefferson Medical College, 1908; age 82; died November 11, 1969. He had been a practicing physician for fifty-nine years, and in 1958 received the PMS Fifty-Year Award for his service in medicine. Surviving are his wife, a son, Jack B. Kremens, M.D., and two sisters.

PENNSYLVANIA MEDICINE continuing education

A list of educational opportunities offered to physicians in the interest of maintaining their competence and skill. Unless otherwise indicated, all courses are designed for physicians engaged in primary patient care.

ADOLESCENTS' MEDICAL CARE

February 26, 1970; York Hospital

I/AMA—**Occurrence and Genesis of Abnormal Menstruation at Puberty** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

ANESTHESIOLOGY

March 7, 1970; Cherry Hill Inn (N.J.)

C/S—**11th Annual Postgraduate Anesthesia Seminar;** by N.J. State Soc. of Anesthesiologists; $4 fee ($14 for nonmembers of NJSSA). Contact Bertram H. Shapiro, M.D., NJSSA, 180 E. 21st St., Paterson, N.J. 07513.

ARTHRITIS AND RHEUMATISM

February 11, 1970; Philadelphia

C/AMA—**Rheumatoid Arthritis;** at Albert Einstein Med. Center; 6 hrs. AAGP credit; $25 fee (includes lunch). Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Med. Center, York & Tabor Rds., Philadelphia 19141.

CARDIOVASCULAR DISEASE

February 12–13, 1970; Philadelphia

C—**Hypertension;** by Heart Assoc. of Southeastern Pa.; at Sheraton Hotel; 14 hrs. AAGP credit applied for; $50 fee (includes 2 meals). Contact John C. Nolan, Prgm. Dir., Heart Assoc. of SE Pa., 318 S. 19th St., Philadelphia 19103.

February 18, 1970; Harrisburg Hospital
(Repeat April 22, 1970)

C—**Cardiopulmonary Resuscitation Instructors' Training Course;** by Pa. Heart Assoc., Harrisburg Hospital and South Central Pa. Heart Assoc; 8 hrs. AAGP credit approved; $15 fee. Contact Mrs. Kathryn M. Close, Exec. Dir., South Central Pa. Heart Assoc., 2915 Wayne St., Harrisburg 17111.

February 19, 1970; York Hospital

I/AMA—**New Concepts in Cardiac Surgery** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

February 25, 1970; Pitt
(Repeat July 8, 1970)

C—**Cardiopulmonary Resuscitation Instructors' Training Course;** by Pa. Heart Assoc., Pitt, and Western Pa. Heart Assoc.; 8 hrs. AAGP credit approved; $15 fee. Contact Bulent Kirimli, M.D., Pitt, Scaife Hall, Pittsburgh 15213.

"CODE KEY"

C—Consecutive days
I—Intermittent
O—Circuit
PG—Postgraduate Traineeship
R—Radio
TV—Television
S—Designed for full-time specialists
AMA—AMA Accredited Institution
C E S—Council on Education and Science, Pennsylvania Medical Society
Hahnemann—Hahnemann Medical College and Hospital
Hershey—Milton S. Hershey Medical Center
Jefferson—Jefferson Medical College of Philadelphia
Penn-Grad—University of Pennsylvania, Division of Graduate Medicine
Pitt—University of Pittsburgh School of Medicine
Pitt P.H.—University of Pittsburgh Graduate School of Public Health
Penn State—Pennsylvania State University
Temple—Temple University Health Sciences Center
U. of Pa.—University of Pennsylvania School of Medicine
Woman's—Woman's Medical College of Pennsylvania

March 4, 1970; Allentown

I/AMA—**Integrated Management of the Patient with Cardiogenic Shock** (8 week Education Program—1st Wed. ea. mo.); by U. of Pa.; at Sacred Heart Hosp.; 3 hrs. AAGP credit. Contact Robert F. Brennan, M.D., Sacred Heart Hosp.; Allentown 18102.

March 19, 1970; Williamsport Hospital

I/AMA—**Coronary Artery Disease; Pre-Infarction and Post-Infarction. Problems of Recognition and Management** (Postgraduate Seminars held 3rd Thurs. ea. mo.); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

CHEST DISEASES

February 9–20, 1970; Philadelphia
(Repeat April 6–17, 1970)

PG/AMA—**Postgraduate Course in Bronchoesophagology;** at Temple; for chest physicians, thoracic surgeons, anesthesiologists and gastroenterologists. $350 fee. Contact Chevalier Jackson Clinic, Temple, 3401 N. Broad St., Philadelphia 19140.

ELECTROCARDIOGRAPHY

February 25–April 29, 1970; Philadelphia

I/AMA—**Advanced Electrocardiography;** each Tuesday, 10 weeks; at Albert Einstein Medical Center, 30 hrs. AAGP credit; $75 fee. Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Rds., Philadelphia 19141.

ENDOCRINOLOGY

February 10, 1970; Chester

I/AMA—**Thyroid Function Tests—How to Evaluate Them** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D. M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 17, 1970; Chester

I/AMA—**Thyroid Nodule—When Not to Operate** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 19, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Thyroid Gland** (Program of Continuing Medical Education); by Jefferson & Penn State; at St. Luke's Hospital, 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia.

February 24, 1970; Chester

I/AMA—**The Outpatient Management of Anemia** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 22, 1970; Pittsburgh

C—**Diagnosis and Treatment of Endocrine Abnormalities in the Male;** by Pitt, West Penn and Shadyside Hosps.; at West Penn Hosp.; 5 hrs. AAGP credit; $15 fee. Contact John B. Hill, M.D., West Penn Hosp., 4800 Friendship Ave., Pittsburgh 15224.

March 4, 1970; Chester

I/AMA—**Enigma of Hypoglycemia** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

GENERAL MEDICINE

Every Thursday; Hazleton State General Hospital

I—**Program of Continuing Medical Education by Hazleton Branch, Luzerne County Medical Society.** Contact Robert Gunderson, M.D., Suite 412 Northeastern Building, Hazleton, Pa. 18201.

(Continued on Page 120.)

★

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Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry and Medical Director
Area Code 704-254-3201

continuing education

February 12, 1970; Allentown Hospital

I/AMA—**Early Diagnosis of the Stroke Prone Patient** (Program of Continuing Medical Education—2nd Thursday, each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 12, 1970; York Hospital

I/AMA—**Pathophysiology of Hepatic Failure** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 13, 1970; Williamsport Hospital

I/AMA—**Surgical Aspects of Venous and Arterial Insufficiency of the Lower Extremities** (Program of Continuing Medical Education—2nd Friday of each month); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

February 19, 1970; Altoona Hospital

I/AMA—**Hyperlipodemias** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut St., Philadelphia 19107.

February 19, 1970; Wilkes-Barre General Hospital

I/AMA—**Clinical Application of Scanning Techniques** (Program of Continuing Education—One Thursday each month); by Jefferson & Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

March 3, 1970; Lebanon

I/AMA—**Use and Misuse of Anti-Biotics** (Continuing Medical Education Program—1st Tues., 4 mos.); by Jefferson and Penn State; at Quentin Riding Academy; 2 hrs. AAGP credit. $8 fee ($35 for 4 sessons). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 5, 1970; Altoona Hospital

I/AMA—**Management of The Pregnant Diabetic** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut St., Philadelphia 19107.

March 5, 1970; Pottsville Hospital

I/AMA—**Infections of the Central Nervous System** (Program of Continuing Medical Education 1st. Thursday each month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia.

HEMATOLOGY

February 18, 1970; Reading

I/AMA—**Newer Concepts in the Diagnosis and Management of Leukemia** (Continuing Education Program—3rd Wed. ea. mo., 8 mos.); by Hahnemann; at Community Gen. Hosp. Contact Paul K. Stolz, M.D., Dir., Cont. Educ., Community Gen. Hosp., 135 N. 6th St., Reading 19601.

OPHTHALMOLOGY

February 19–20, 1970; Erie

I/AMA—**Opthalmologic Manifestations of Systemic Diseases** (Program of Continuing Medical Education—1 hr/1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State, at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

ORTHOPEDICS

March 5–6, 1970; Erie

I/AMA—**Hand Surgery** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

PATHOLOGY

February 24, 1970; Reading

I—**Tissue Culture and Human Cytogenetics** (1969–70 Continuing Education Program; 4th Tues. ea. mo; 8 mos.); at St. Joseph's Hosp.; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

PEDIATRICS

February 18, 1970; Scranton

I/AMA—**Pediatric Surgery** (Program of Continuing Medical Education—3rd Wed. ea. mo. 8 mos.); by Jefferson and Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 2, 1970; Philadelphia

I/AMA—**Pediatric Office Emergencies** (Program of Continuing Medical Education—1st Mon., 8 mos.); by Jefferson and Penn State; at Methodist Hosp.; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

PSYCHIATRY

February 18–May 13, 1970; Philadelphia

I—**Advanced Applied Office Psychiatry**; at the Institute of Pennsylvania Hospital—Each Wednesday, 12 weeks; 48 hrs. AAGP credit; $50 fee. Contact Sydney E. Pulver, M.D., The Institute, 111 N. 49th St., Philadelphia 19139.

February 19, 1970h Pottsville

I/AMA—**Differential Diagnostic Considerations of Psychosomatic Disorders** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

February 24, 1970; Johnstown

I/AMA—**Psychotherapeutic Drugs** (Program of Continuing Medical Education—last Tuesday, 7 months); at Conemaugh Valley Memorial Hospital; by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 5, 1970; York Hospital

I/AMA—**Pathophysiology of Schizophrenia** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St. Philadelphia 19107.

March 19, 1970; Wilkes-Barre General Hospital

I/AMA—**Battle of the Sexes—Is Marriage Worth Saving?** (Program of Continuing Medical Education—one Thursday each month); by Jefferson and Penn State; 3 hours AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

SURGERY

February 18–March 25, 1970; Philadelphia

I/AMA—**Office Surgery**; Each Tuesday, 6 weeks; at Albert Einstein Medical Center; 18 hr. AAGP credit; $75 fee. Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Rds., Philadelphia 19141.

PENNSYLVANIA MEDICINE

meetings

FEBRUARY

Wills Eye Hospital Twenty-second Annual Clinical Conference, February 5-7, 1970, Bellevue Stratford Hotel, Philadelphia. Contact Robert D. Mulburger, M.D., 1601 Spring Garden St., Philadelphia 19130.

MARCH

New Jersey Society of Anesthesiologists Seminar, March 7, 1970, Cherry Hill Inn, Cherry Hill, N. J. Contact New Jersey Society of Anesthesiologists, 180 E. Twenty-first St., Paterson, N. J. 07513.

Mediclinics Postgraduate Medical Refresher Course, March 9-19, 1970, Galt Ocean Mile Motel, Fort Lauderdale, Fla. Contact Mediclinics, 832 Central Medical Bldg., St. Paul, Minn. 55104.

American College of Surgeons Sectional Meeting for Doctors and Nurses, March 16-18, 1970, Washington, D. C. Contact American College of Surgeons, 55 E. Erie St., Chicago, Ill. 60611.

APRIL

National Conference on Rural Health, AMA Council on Rural Health, April 9-10, 1970, Pfister Hotel, Milwaukee, Wisc.

Sixth World Congress of Gynecology and Obstetrics, April 12-18, 1970, New York City. Contact Donald F. Richardson, Congress Coordinator, 79 W. Monroe St., Chicago, Ill. 60603.

American Industrial Health Congress, April 13-16, 1970, Chicago, Ill. Contact Howald N. Schulz, Director, American Industrial Health Conference, 55 E. Washington St., Chicago, Ill. 60602.

First International Congress on Group Medicine, April 26-30, 1970, Centennial Congress Hall, Winnipeg, Manitoba, Canada. Contact International Congress on Group Medicine, 425 St. Mary Ave., Winnipeg, 1, Manitoba, Canada.

Sixth International Medical-Legal Seminar, April 24-May 10, 1970, Spain, Portugal and North Africa, Contact Cyril Wecht, M.D., J.D., Director, Pittsburgh Institute of Legal Medicine, 1417 Frick Bldg., Pittsburgh 15219.

PENNSYLVANIA MEDICINE

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Films: "A Look at Sex Education in the School," on loan from AMA Film Library, 535 N. Dearborn St., Chicago, Ill. 60610 . . . "Next Witness," tells M.D.'s what to expect on the witness stand, on loan from AMA Film Library, 535 N. Dearborn St., Chicago, Ill. 60610 . . . "The Mark Waters Story," Richard Boone starring in a 25-minute film telling of a newspaperman writing his own obituary while dying of lung cancer caused by smoking, on loan from Modern Talking Picture Service, 2323 New Hyde Park Rd., New Hyde Park, N. Y. 11040 . . .

Booklets: *The Unmarried Mother*, 25¢ from Public Affairs Committee, 381 Park Ave. South, New York, N.Y. 10016 . . . *Tips on Athletic Training*, single copies 15¢ from Order Department, AMA, 535 Dearborn St., Chicago, Ill. 60610 . . . *Proceedings of the 1969 National Medicolegal Symposium*, $7.00 from Order Department, AMA, 535 N. Dearborn St., Chicago, Ill. 60610 . . . *Perspectives in Public Welfare*, 70¢ from Superintendant of Documents, U. S. Government Printing Office, Washington, D.C. 20402 . . . *Medicare Leaflets*, explanation of coverage to beneficiaries, from Medicare, P. O. Box 65, Camp Hill, Pa. 17011 . . . *Kidney Disease Services, Facilities, and Programs in the United States*, from Kidney Disease Program, Regional Medical Programs Service, 4040 N. Fairfax Dr., Arlington, Va. 22203 . . . *Drug Dependence*, quarterly journal, 50¢ each issue from Superintendant of Documents, U. S. Government Printing Office, Washington, D.C. 20402.

PENNSYLVANIA MEDICINE classified

PHYSICIANS WANTED

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Mental Hospital Director—mid-state location combines best of urban and rural. Salary to $27,697. Active treatment program in 690-bed facility. Community programs developing. Minimum six years in psychiatry with four in administrative or supervisory capacity. Write: Harry H. Negley, Jr., M.D., Chairman, Board of Trustees, Hollidaysburg State Hospital, P. O. Box 319, Hollidaysburg, Pa. 16648

General practitioner urgently needed. Ideal country practice; clean air, good water, hunting, fishing and golfing. Six miles to accredited open hospital. Will aid financially if necessary. Contact Salisbury Lions Club, Salisbury, Pa. 15558.

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Pennsylvania Licensed Physician—available January 1, 1970 to cover outpatient emergency service in 274-bed accredited general hospital. Five days a week, 8 A.M. to 5 P.M. Write: Office of Administrator, Lower Bucks Hospital, Bristol, Pa. 19007.

Radiologist to join thriving department; expanding 360-bed hospital near Syracuse, N. Y.; $50–80,000. **Anesthesiologist** for 90-bed hospital, commute Buffalo, N. Y.; $30,000 and up. Apply American Medical Personnel, 159 E. Chicago Ave., Chicago, 60611. Telephone (312) 337-4221.

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Physician for Student Health Service. Easy hours, pleasant work, excellent fringe benefits. Equal opportunity employer. Write: Director, Student Health Service, Lehigh University, Bethlehem, Pa. 18015.

A Board certified or Board eligible OB-GYN with military obligations completed is wanted to associate with 36-year old Junior Fellow in beautiful Pittsburgh suburb (twenty minutes from downtown). Salary, then early partnership. Contact John I. Moraca, M.D., 1099 Ohio River Blvd., Sewickley, Pa. 15143.

Are you tired of working long hours and of the frustrations of private practice? Would you exchange the large estate you are amassing for an adequate salary and a chance to live now? Mayview State Hospital has openings for training in its Affiliate in Psychiatry Program. 37½ hour week; adequate vacation and holiday time to spend as you see fit; excellent pension benefits. On completion of course and certification, openings are available in most areas of Pennsylvania. For information contact Robert St. John, M.D., Director of Education, Mayview State Hospital, Bridgeville, Pa. 15017. Telephone: (412) 343-2700.

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Emergency Department Physicians —D.O. or M.D.; Pennsylvania registered. Four wanted to cover around the clock calendar. Salary. Administrator, Lewistown Hospital, Lewistown, Pa. 17044.

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RESEARCH

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PRACTICE AVAILABLE

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PENNSYLVANIA MEDICINE in my opinion

Feedback in Private and Governmental Expenditures

One of the basic and fundamental differences between private and governmental expenditures is the largely effective feedback present in the use of the former, and its essential absence or suppression in the use of public funds.

Feedback may be defined as the energy return from the secondary component of a system to the primary energizing component; this serves as a controlling signal to the primary, influencing the quantity of stimulating energy it releases. In any system consisting of a primary source of energy or stimulus and secondary responding subject or subjects, feedback occurs to the degree that the response of the secondary influences the output of the primary.

In the free enterprise sector of the economy, profits function effectively as the source for feedback. In any given business, when funds are allocated for productive purposes, profits serve to guide the further use of funds, signaling an increase or a decrease.

For example, a corporation which has funds in excess of its present needs, may diversify and invest in another business enterprise. It will readily have evidence indicating whether the secondary activity is profitable or not. If after a sufficient test, the secondary business is profitable, further funds will be invested; if it should be operating at a loss, consideration will be given to the desirability of discontinuing investment, or of improving the efficiency of the operation. In these instances, the profit level initiates a feedback to control the amount of capital investment. This is not intended to ignore or minimize the feedback that may occur from other than the profit level, such as social desirability and contribution.

In the case of public expenditures, there is no profit level to serve as a source for feedback. On the contrary, efforts are frequently made to supress such feedback as occurs, because of the involvement of governmental expenditure with the accumulation of power. There are numerous examples of such suppression.

In the past, as the budget year ended, and unspent funds remained, certain agencies such as the Veterans Administration, in its use of medical funds, created artificial techniques for spending them. This was done because a budget residue would act as feedback to reduce expenditure appropriations during the coming year. Here the desire for power, symbolized by the level of budgetary appropriation, caused suppression of significant feedback.

The present inability to learn precisely the total expenditure of tax funds under the Medicare program is another example of such suppression. Similarly, during several years in the past, the Secretary of Health in Great Britain refused precisely to indicate the number of physicians who were emigrating because of distaste for the National Health Service.

Because of this marked disparity of available feedback in the government sector, as contrasted with the private sector, inevitably there must result a much less efficient use of governmental funds, with a significantly reduced relation between funding and productivity. On the contrary, there is a closer relation between the level of governmental funding and the transfer of power that occurs. The latter occurs as individuals and segments of the economy become dependent upon governmental funding for the continuation of their resultant activities. As governmental funding becomes significant in such continuance, the threat of ending such funding may become a lever to compel various types of compliance. Parallel to that, it involves the recipients in the suppression of unfavorable feedback, either voluntarily or by compulsion.

No effort has been made to evaluate other types of feedback involving social desirability, personal need, and others. Analysis, however, of the disparity in funds between the private sector, as compared with the governmental sector, justifies the conclusion that its absence and suppression in the latter result in inefficiency. There is an accompanying inability to properly evaluate productivity and a technique for the transfer of power in a way that is inimical to the preservation of maximal individual freedom and responsibility.

Paul S. Friedman, M.D.
Past President
Philadelphia County Medical Society

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PENNSYLVANIA MEDICINE

MARCH 1970

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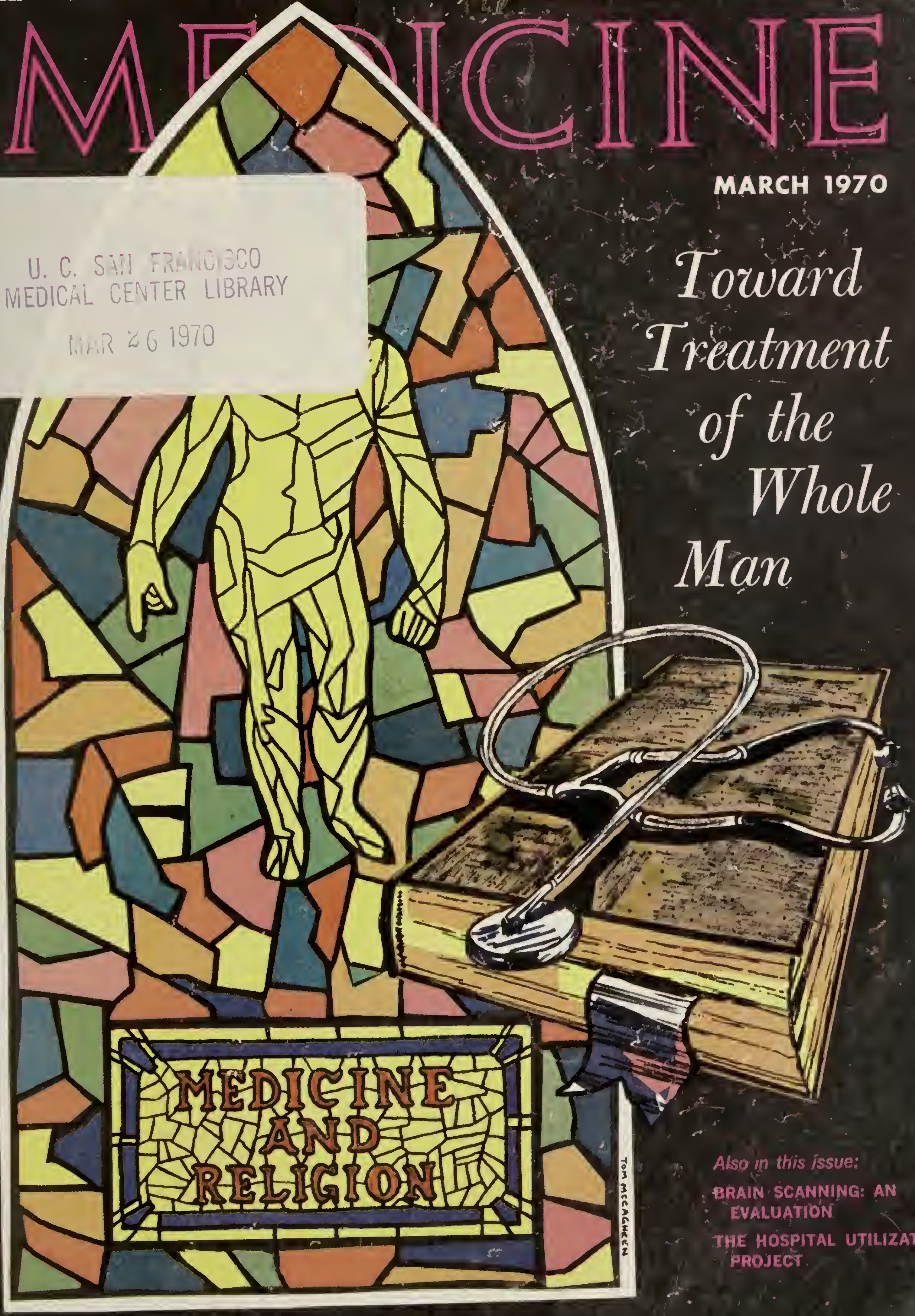
Toward Treatment of the Whole Man



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BRAIN SCANNING: AN EVALUATION

THE HOSPITAL UTILIZATION PROJECT

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The Pennsylvania Medical Society and many of our county medical societies actively support PAMA and its county groups with advisors and financially. You can learn more about them from the members and staff of our State Society Advisory Committee by contacting this office.

Ask your secretary or nurse if she is a member; if not, see that she joins it. You can pay her dues out of your office expenses. It is a good investment. Only through physician encouragement will PAMA become the important asset to medicine that it can be.

Sincerely yours,

William A. Barrett

William A. Barrett, M.D.
President

PENNSYLVANIA
MEDICINE

/medigram

MARCH, 1970

PMS SAYS MEDICAID PAY TO MD'S SHOWS LOW-FEE SERVICE TO NEEDY

With news media about to publish a list of twenty-five physicians in the state who received $25,000 or more in medical assistance payments during 1969, the Pennsylvania Medical Society seized the initiative, obtained the list itself from the Department of Public Welfare, issued its own release and described the payments it had been able to check as indicative of commendatory medical service to needy patients at less than usual fees. The State Society found only four of its members on the list of physicians which included eight medical doctors and seventeen doctors of osteopathy. Of the twenty-five physicians on the list, twenty-one practice in Philadelphia and there is one each in Blair, Erie, Fayette and York Counties.

COMMITTEE VOTES AGAINST INCLUSION OF CHIROPRACTIC

The House Committee on Health and Welfare has voted not to report the Senate-passed measure, S-254, which would include chiropractic services in Blue Shield coverage, to the floor of the House for action. This does not mean the bill is dead, because members of the committee can move to reconsider the action. Representative Sarah A. Anderson, Philadelphia, is chairman of the committee.

COMMISSION ON FORENSIC MEDICINE MEETS WITH BAR ASSOCIATION GROUP

The PMS Commission on Forensic Medicine under the chairmanship of James M. Smith, M.D., Carlisle, met with the Pennsylvania Bar Association's Medical/Legal Committee, chaired by Homer King of Pittsburgh. Purpose of the meeting was to discuss the growing crisis in medical malpractice suits. A recommendation from the Washington County Medical Society calling for a state-operated malpractice screening program and pending legislation on the matter were discussed. The groups decided to meet again in March and April.

MINOR'S CONSENT BILL SIGNED BY GOVERNOR

Governor Raymond P. Shafer has signed H-775, the measure giving minors over eighteen effective consent to medical treatment. It has become Act No. 10 of 1970. The measure contains protection for physicians treating minors who allege they are eighteen and are not, or when the physician feels treatment is vital to the health of the minor. PMS supported the law.

PMS SOCIO-ECONOMIC COURSE SCHEDULED

The PMS Council on Public Service will conduct a course on the socio-economic aspects of medicine for interns and residents at Temple University Hospital. The course, entitled "You, Medicine and Success" will be presented in one-hour weekly sessions on Wednesdays at 5 p.m. beginning March 11. It will run for six consecutive weeks. A similar course was conducted at the Geisinger Medical Center, Danville, last fall. The results of both programs will be carefully evaluated by the council to determine the feasibility of offering the course on a statewide basis.

MEDICAL MALPRACTICE DRAMA SCHEDULED FOR GETTYSBURG

Depicting a courtroom case history of malpractice involving the emergency department, the doctor and the law, a medical drama in one act entitled "Malpractice in the Emergency Room" will be presented by the Pennsylvania Medical Society at 1:30 p.m., Wednesday, March 25, 1970, at the Adams County National Branch Bank Building, Harrisburg Rd., Gettysburg. Open to all physicians, nurses and allied professions, the session is recognized for four elective AAGP credit hours. Registration fee is $5.00. Additional details and registration forms may be obtained from the PMS headquarters.

MD'S & DO'S CO-SPONSOR SCIENTIFIC PROGRAM

In their first cooperative effort toward strengthening inter-professional relationships, doctors of medicine and doctors of osteopathy in Pennsylvania will co-sponsor a one-day scientific program Saturday, April 4, 1970, at the West Shore Country Club, Camp Hill. Open to all physicians and osteopaths in the state, the program will include discussions on diagnosis and classification of hypertension; drug selection in patients with hypertension; emotional factors in hypertensive patients; early diagnosis of venous disorders and thrombosis; cerebral vascular insufficiency; indications for surgery in vascular obstruction and rehabilitation of stroke patients. Registration should be made to the PMS Council on Education and Science by March 27, 1970. The registration fee of $10.00 includes lunch.

MEDICARE FOR DISABLED?

U.S. Rep. Wilbur D. Mills (Ark.), chairman of the House Ways and Means Committee, hopes to extend Medicare's hospital benefits to more than one million disabled workers under the age of 65. His proposal probably will be a part of the new Social Security bill. He claims that "we can't any longer justify providing Medicare for men over 65 who are working and not doing it for the disabled who can't work." His proposal would not extend the voluntary medical insurance part of Medicare to the disabled.

MEDICARE CRACKDOWN

The furor over alleged fraud and abuses under Medicare is much more smoke than fire. Medicare pays some 30 million physicians' bills and 12 million institution bills each year. To date, only thirteen cases have been referred to the Justice Department and another thirty-five possible fraud cases are being prepared. Some 2,500 cases have been investigated in three and one-half years and more than half of them resulted from clerical error, misunderstandings or honest mistakes.

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(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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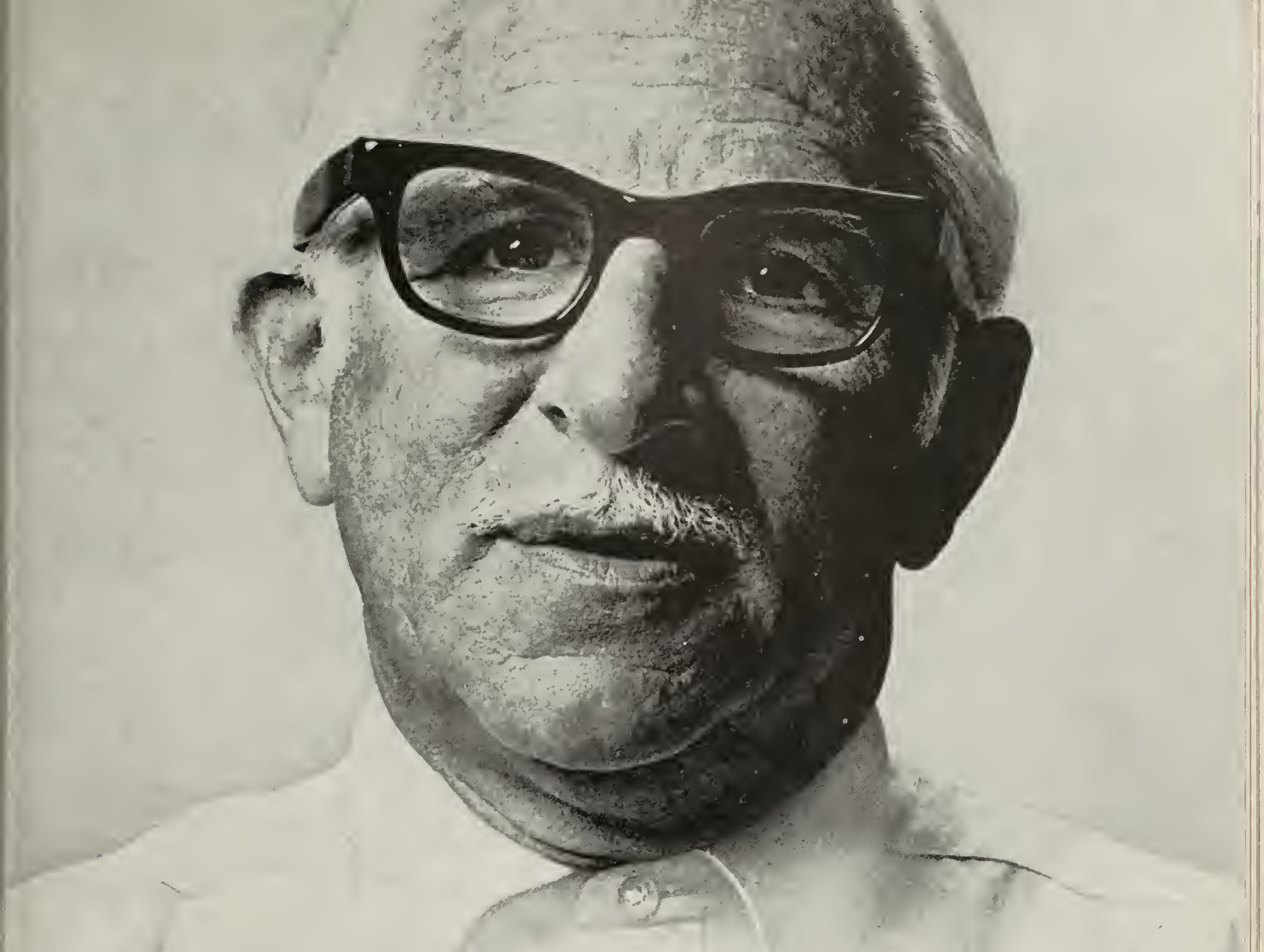

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Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, food and some dairy products. Treatment of streptococcal infections shoul continue for 10 days, even though symptoms have subsided.

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rheumatoid spondylitis, and osteoarthritis of the hip

do for these patients?

salicylates and rest

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(INDOMETHACIN | MSD)

helps relieve pain, fever, swelling, and tenderness

Please see new prescribing information on following page.

REVISED PRESCRIBING INFORMATION

IMPORTANT NOTE: INDOCIN (Indomethacin, MSD) cannot be considered a simple analgesic and should not be used in conditions other than those recommended under Indications. The drug should not be prescribed for children because safe conditions for use have not been established.

General Adverse Effects: Because of the high potency of the drug and the variability of its potential to cause adverse reactions, the following are strongly recommended: 1) the lowest possible effective dose for the individual patient should be prescribed. Increased dosage tends to increase adverse effects, particularly in doses over 150-200 mg/day, without corresponding clinical benefits; and 2) careful instructions to, and observations of, the individual patients are essential to the prevention of serious and irreversible, including fatal, adverse reactions, especially in the aging patient.

Indications: Symptomatic relief of adult rheumatoid and degenerative joint disease unresponsive to adequate trial of salicylates and other measures of established value, such as appropriate rest. Has been found effective in active stages of: 1) moderate to severe rheumatoid arthritis including acute flares of chronic disease, 2) moderate to severe rheumatoid (ankylosing) spondylitis, and 3) moderate to severe degenerative joint disease of the hip (osteoarthritis of the hip). Has been found effective in relieving pain and reducing fever, swelling, and tenderness in acute gouty arthritis in selected patients. May enable reduction of steroid dosage in patients receiving steroids for the more severe forms of rheumatoid arthritis; in such instances the steroid dosage should be reduced slowly and the patients followed very closely for any possible adverse effects.

Contraindications: Children 14 years of age and under; pregnant women and nursing mothers; active gastrointestinal lesions or history of recurrent gastrointestinal lesions; allergy to aspirin and indomethacin.

Warnings: *Gastrointestinal Effects:* Because of the occurrence and, at times, severity of gastrointestinal reactions, be continuously alert for any sign or symptom signaling a possible gastrointestinal reaction. The risks of continuing therapy with INDOCIN in the face of such symptoms must be weighed against the possible benefits to the individual patient. Gastrointestinal effects may be reduced by giving the drug immediately after meals, with food, or with antacids. Use greater care in aging patients.
Ocular Effects: Corneal deposits and retinal disturbances, including those of the macula, have been observed in some patients on prolonged therapy. Discontinue therapy if such changes are observed. Ophthalmologic examination at periodic intervals is desirable in patients on prolonged therapy.
Central Nervous System Effects: INDOCIN (Indomethacin, MSD) may aggravate psychiatric disturbances, epilepsy, and parkinsonism, and should be used with considerable caution in patients with these conditions. If severe CNS reactions develop, discontinue the drug.

Precautions: Blurred vision may be a significant symptom that warrants a thorough ophthalmologic examination. Patients should be cautioned about engaging in activities requiring mental alertness and motor coordination, as driving a car. Headache which persists despite dosage reduction requires complete cessation of the drug. May mask the usual signs and symptoms of infection; therefore, the physician must be continually on the alert for this and should use the drug with extra care in the presence of existing controlled infection. After the acute phase of the disease is under control, an attempt to reduce the daily dose should be made repeatedly until the patient is off entirely.

Adverse Reactions: *Gastrointestinal Reactions:* Single or multiple ulcerations of the esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage, with fatalities in some instances; gastrointestinal bleeding without obvious ulcer formation; perforation of preexisting sigmoid lesions (diverticulum, carcinoma, etc.); rarely, increased abdominal pain in ulcerative colitis patients or development of ulcerative colitis and regional ileitis; gastritis, which may persist after the cessation of the drug; nausea, vomiting, anorexia, epigastric distress, abdominal pain, and diarrhea.
Eye Reactions: Corneal deposits and retinal disturbances, including those of the macula, have been observed on prolonged therapy; blurring of vision.
Hepatic Reactions: Rarely, toxic hepatitis and jaundice, including some fatal cases.
Hematologic Reactions: Aplastic anemia, hemolytic anemia, bone marrow depression, agranulocytosis, leukopenia, and thrombocytopenic purpura. Since some patients manifest anemia secondary to obvious or occult gastrointestinal bleeding, appropriate blood determinations are recommended.
Hypersensitivity Reactions: Acute respiratory distress, including dyspnea and asthma; angiitis; pruritus; urticaria; angioedema; skin rashes.
Ear Reactions: Hearing disturbances, deafness, tinnitus.
Central Nervous System Reactions: Psychotic episodes, depersonalization, depression, coma, convulsions, peripheral neuropathy, drowsiness, mental confusion, lightheadedness, dizziness, headache.
Cardiovascular-Renal Reactions: Edema, elevation of blood pressure, hematuria.
Dermatologic Reactions: Loss of hair, erythema nodosum.
Miscellaneous: Rarely, vaginal bleeding, hyperglycemia, glycosuria, ulcerative stomatitis, and epistaxis.

Supplied: Capsules containing 25 mg indomethacin each, in bottles of 100 and 1000; capsules containing 50 mg indomethacin each, in bottles of 100.

For more detailed information, consult your Merck Sharp & Dohme representative or see the package circular.

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newsfronts

AMA Adopts Staff Rights Position

The Pennsylvania Delegation to the AMA House of Delegates, by direction of the PMS House of Delegates, submitted a resolution to medicine's national governing body at its recent meeting which would have the American Medical Association reaffirm that hospital medical staff appointments and delineation of privileges remain the prerogative of the medical staffs and adopt the position that any interference with these medical staff rights constitutes a violation of medical ethics.

In reviewing the Pennsylvania resolution, the AMA reference committee believed that the implementation of a number of the resolves would be impossible since the Principles of Medical Ethics are not applicable to non-physicians.

The reference committee also believed that the Revised Standards for Hospital Accreditation of the Joint Commission on Accreditation of Hospitals, plus certain interpretive material accepted for field testing, provide the protection of physician rights sought by the Pennsylvania resolution.

While concurring with the intent of Resolution 27 submitted by the Pennsylvania Delegation to the AMA House of Delegates, the AMA House adopted the following substitute resolution:

"Whereas, There is evidence of a growing trend by hospital governing boards to abrogate the prerogatives of medical staffs; and

Whereas, The Joint Commission on Accreditation of Hospitals has approved the following stipulations in the Governing Body and the Management Section of its Revised Standards for Hospital Accreditation:

"Standard VIII

The governing body shall delegate to the medical staff the authority to evaluate the professional competence of staff members and applicants for staff privileges and shall hold the medical staff responsible for making recommendations to the governing body concerning initial staff appointments, re-appointments and the assignment or curtailment of privileges."

"Standard IX

The medical staff bylaws, rules and regulations shall be subject to the approval of the governing body and shall include an effective formal means for the medical staff to participate in the development of hospital policy, insofar as it affects patient care."

"Interpretation

The governing body must ensure that medical staff bylaws, rules and regulations are developed and accepted by the medical staff. Therefore, be it

Resolved, That the AMA endorse Standards VIII and IX of the Governing Body and Management Section of the Revised Standards for Hospital Accreditation; and be it further

Resolved, That the Committee of AMA Commissioners be urged to ensure that the interpretative statement requiring medical staff bylaws to be developed and accepted by the medical staff be adopted as a policy by the Joint Commission."

PMS Fifty Year Awards Presented

Three practicing physicians of Delaware County *received PMS Fifty-year Awards at a dinner meeting of the county medical society recently. The award is presented to those who have given fifty years of service to the medical profession. Shown above with PMS President William A. Barrett of Pittsburgh, second left, are, left, Carl T. Houlihan, M.D., Upper Darby; second right, H. Armin Stecher, M.D., Havertown and right J. O. Coffey, M.D. Drexel Hill. New officers of the Delaware County Medical Society installed at the meeting are: Conrad A. Etzel, M.D., president; John H. Wigton, M.D., president-elect; S. Hunter Neal, M.D., secretary and Philip J. Esgro, M.D., treasurer.*

newsfronts

State Farm Show Visitors See PMS Exhibit

HIGHWAY HAZARD
...when alcohol hits the brain
Dazed & Dejected Stupor
Dead Drunk
Decidedly Dead
If you're going to DRIVE DON'T DRINK!
Presented as a Public Service by PMS

"The Drinking Driver" *was the theme of the Pennsylvania Medical Society exhibit at the 1970 Annual Pennsylvania Farm Show in Harrisburg. Mrs. Renato Salva (left) and Mrs. Julius Anderson were among the many ladies of the Woman's Auxiliary of the Dauphin County Medical Society who volunteered their time as hostesses at the five-day display.*

HEW Bolsters Medicaid Anti-fraud Posture

The Department of Health, Education, and Welfare announced it has strengthened procedures to prevent fraudulent abuse of the medicaid program.

Effective immediately, states must establish criteria for identifying situations in which there may be fraud, arrange for prompt referral of such situations to law enforcement agencies, and develop methods of investigation which ascertain the facts without infringing on the legal rights of the individuals involved.

In addition, beginning April 1, 1970, all Medicaid billing forms distributed for use by providers must carry a notice that any fraud or concealment will be prosecuted under applicable federal or state law or both.

Billing forms must also carry a disclaimer of fraud to be signed by the provider.

Cases in which there is valid reason to suspect fraud must, after January 1, 1970, be reported promptly to HEW's Social and Rehabilitation Service.

The procedures are among several being developed to help states tighten their management of medical assistance programs.

State Studies Ambulance Services

The State Health Department's office of comprehensive health planning began a survey to determine if adequate ambulance services are available to serve all citizens in the Commonwealth.

The survey is expected to be completed in spring and is being conducted by the office's newly organized emergency health services unit.

According to John E. Rowland, director of the unit, "We are aware of several places in the state where there is no ambulance service of any kind available. We hope to identify these gaps and find ways to fill them. In some cases the problems can be met by coordinating the use of existing resources."

The unit was organized on the recommendation of a special coordinating committee to concentrate the department's efforts to provide emergency care when accidents occur to individuals. The unit will be responsible for developing programs to assure adequate transportation, emergency rooms, communications, and training. It is not responsible for planning the handling of catastrophies.

Lung, Breast Cancer Lead in State Deaths

Cancer remained the second most frequent cause of death in Pennsylvania in 1968 taking 22,065 lives according to a new State Health Department report.

The 1968 figures, highest in the state's history, compare with 21,450 cancer deaths in 1967, the department notes in its cancer morbidity and mortality report.

The report lists the cancer death rate per 100,000 population as 187.7 in 1968 compared with 184.2 in 1967.

As it has since 1958, cancer of the lung in both sexes combined exceeds deaths due to cancer of any other area of the body. Second is cancer of the colon, followed by breast, stomach, prostate, and pancreas.

The most frequent cancer causing death in males is cancer of the lung, which caused 27.7 per cent of male cancer deaths in 1968. In men, cancer of the colon, prostate, stomach and pancreas follow in that order as other frequent death causes.

In women, cancer of the breast is the leading cause of cancer deaths. Cancer of the colon ranks second, the uterus is third, the lung, fourth, and cancer of the ovary, fifth.

Since 1960, lung cancer in women has been increasing faster than any other cancer in women, probably because of cigarette smoking, the department notes. And, for the first time, 1968 saw deaths from lung cancer in women (6.6 per cent) exceeding deaths from cancer of the ovary (6.5 per cent).

Dramatically, deaths from cancer of the respiratory tract for both sexes combined show the greatest increase, 988 per cent, in the past 38 years.

(The department began keeping statistics for many body sites in 1930.)

Leukemia mortality rates show the second greatest increase, 280 per cent since 1930, with cancer of the pancreas next at 213.8 per cent for the 38-year-period.

On the brighter side, since 1930, decreases have occurred in death rates in cancer of the buccal cavity, liver, stomach and uterus. For the first four, the decrease is attributed to a decrease in incidence, but the decrease in uterine cancer appears due in part to earlier detection and earlier treatment.

As for cancer morbidity figures, from the data reported to the department for 1968, cancer of the skin was the most frequent with cancer of the breast second, followed by lung, uterus and colon.

While the greatest number of cancer deaths occur in the 65–74 age group, cancer mortality rates increase with age, the highest rate being in the age group over 84 years, the department notes.

Blue Cross Adds Services

Capital Blue Cross of Central Pennsylvania has announced additional services have been made available under the optional Blue Cross and Blue Shield diagnostic and anesthetic coverage, and benefits have been broadened under the Blue Cross 65-Special contract.

Beginning with the effective date of each direct payment and group subscriber's rate changes for diagnostic benefits, the $5.00 deductible and $75 annual maximum amounts applicable to the present diagnostic and anesthetic coverage will be eliminated.

Both Blue Cross and Blue Shield benefits are being expanded to include not only the presently covered diagnostic X-ray examinations, basal metabolism tests, cardiography, encephalography, and Blue Shield anesthetic services, but also radioisotopic studies and pathological (laboratory) examinations.

These services will be provided by Blue Cross as full service benefits, except in the case of pathological examinations where, under both Blue Cross and Blue Shield, the subscriber will be required to pay a $10 deductible for such examinations within any fourteen-day period. Except for groups enrolled under the prevailing fee program, Blue Shield payments will continue to be made in accordance with the fee schedule.

Richard D. Rife, president of Capital Blue Cross, said this expanded diagnostic coverage will serve to encourage subscribers to use outpatient benefits as a substitute for inpatient hospitalization.

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ERRATUM

In the Pennsylvania Medical Society Directory of Officials and Staff which appeared in the January issue of PENNSYLVANIA MEDICINE, a transcription error occurred in listing the Vice-Chairman of the Council on Medical Service as *John Helwig, Jr., M.D.* The correct Vice-Chairman of the Council is J. Eugene Ruben, M.D., of 2601 Parkway, Philadelphia, Pa. 19130.

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Serum Potassium Levels (in mEq./L)

Number of patients	Mean initial value	Mean final value
14	3.23	4.83
16	3.50	4.40
25	4.52	4.47

K-Lyte can offer effective potassium supplementation without the gastrointestinal complications sometimes associated with potassium chloride tablets and thiazide-potassium chloride combination therapy. Effervescent K-Lyte is taken in solution, speeding up absorption to avoid these hazards.

Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department, Mead Johnson Laboratories, Evansville, Indiana 47721

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LABORATORIES

Total Medical Coverage Due Says Report

"Expansion of both private and government health insurance systems, and plans which are a combination of both, should make fairly complete medical coverage practically universal by 1980," says the Insurance Information Institute in its new publication, *Report on Tomorrow*.

In predicting the future in a multitude of areas including the nation's economy, transportation and society, the institute forecasts that the result of the availability of more medical benefits will present the problem of matching the supply to the demand.

In an attempt to resolve the supply/demand dilemma, expansion of medical school capacity already has begun, says the book, and steps are being taken to speed medical training.

Also seen in the crystal ball are huge increases in the number of trained medical aides and hospital technicians, and the creation of an entirely new category of assistants occupying a position midway between nurse and M.D.

In speaking on the swiftly-rising costs for modern medical equipment, the report feels that huge medical complexes may begin to replace present-day hospitals, and doctors are expected to associate themselves increasingly either with these centers or with various forms of group practice.

To fill the gap between such expensive facilities and home care, the institute "futurologists" say there will be a large growth in nursing homes and convalescent "halfway houses."

A central feature of medical practice, either in the hospital or in the physician's office, will be computerized diagnosis and record-keeping, claims the eighty-page booklet. A physician, querying a central computer from the remote terminal of his office, will receive the patient's medical history and a summary of existing knowledge on similar cases, with suggested diagnosis and treatment.

"Medical malpractice suits, already an insurance problem, may be expected to become increasingly troublesome as doctors grapple with new techniques and new equipment," according to the medical experts at the institute. They feel that computerized medicine may put both doctors and insurers in a paradoxical squeeze as people tend to sue either for failure to make use of the computers or for over-reliance upon them. A glimmer of hope surrounds the possibility that present studies by medical groups and by Congress will lead to radical changes in malpractice liability.

Because hospital costs have been rising faster than most other consumer items, and seem due to go on rising, the Insurance Information Institute sees medical and hospital insurance, as well as personal injury auto insurance, becoming more expensive. Proposed restructuring of health insurance coverages away from hospital-oriented care and toward less expensive out-patient treatment and preventive care should offset rising costs.

What does it mean for the consumer-patient? Thanks to the advances of health sciences and health insurance, the institute tells us that people ten years from now should live longer and enjoy it more.

York RN's Offered Refresher

Registered Nurses in the York Community are being offered a seven week nurse refresher course to be given by York Hospital's nursing service department.

"This course is being offered as a community service to assist the inactive nurse to upgrade her skills by orienting her to current concepts and practices of nursing," said Mrs. Evelyn B. Snyder, director of nursing service.

York Hospital nurse supervisors, head nurses and dietitians will conduct the classes. For the class of approximately twenty-five nurses expected to enroll, sixty hours will be spent in classroom instruction, along with sixty hours of clinical experience.

Subjects to be covered include, changing concepts in nursing care; legal aspects; team nursing; individualized patient care; evaluation of patient care; patient safety; nutrition; pharmacology . . . medications and their uses; and specialized nursing. Clinical experience, which will be concurrent with classroom studies, will be in York Hospital's nursing care units. Because of medical advances, the hospital's need for skilled and knowledgeable personnel has become greater. Nurses now specialize. Many of York Hospital's registered nurses have continued their education to receive bachelor of science and masters degrees in nursing. To encourage advanced education, York Hospital provides staff nurses with partial tuition refund.

Economic Singles Offered Patients

Hospital costs are skyrocketing and York Hospital is attempting to reverse this trend by giving patients a single room that offers privacy, comfort and conveniences, at semi-private room rates.

Eighty of these rooms are being planned now for construction in the hospital's multi-million dollar expansion program. The new architectural patient room concept allows the same number of these rooms to be constructed in the same area as semi-private rooms would take. It also provides the patient with lavatory facilities.

The 10 × 11 foot room, with an attached 5 × 5 foot lavatory facility room, includes furnishings, an electric controlled bed, a modern lighting system and a patient service center. This single room has been planned to provide greater patient comfort as well as functional convenience for the delivery of nursing care.

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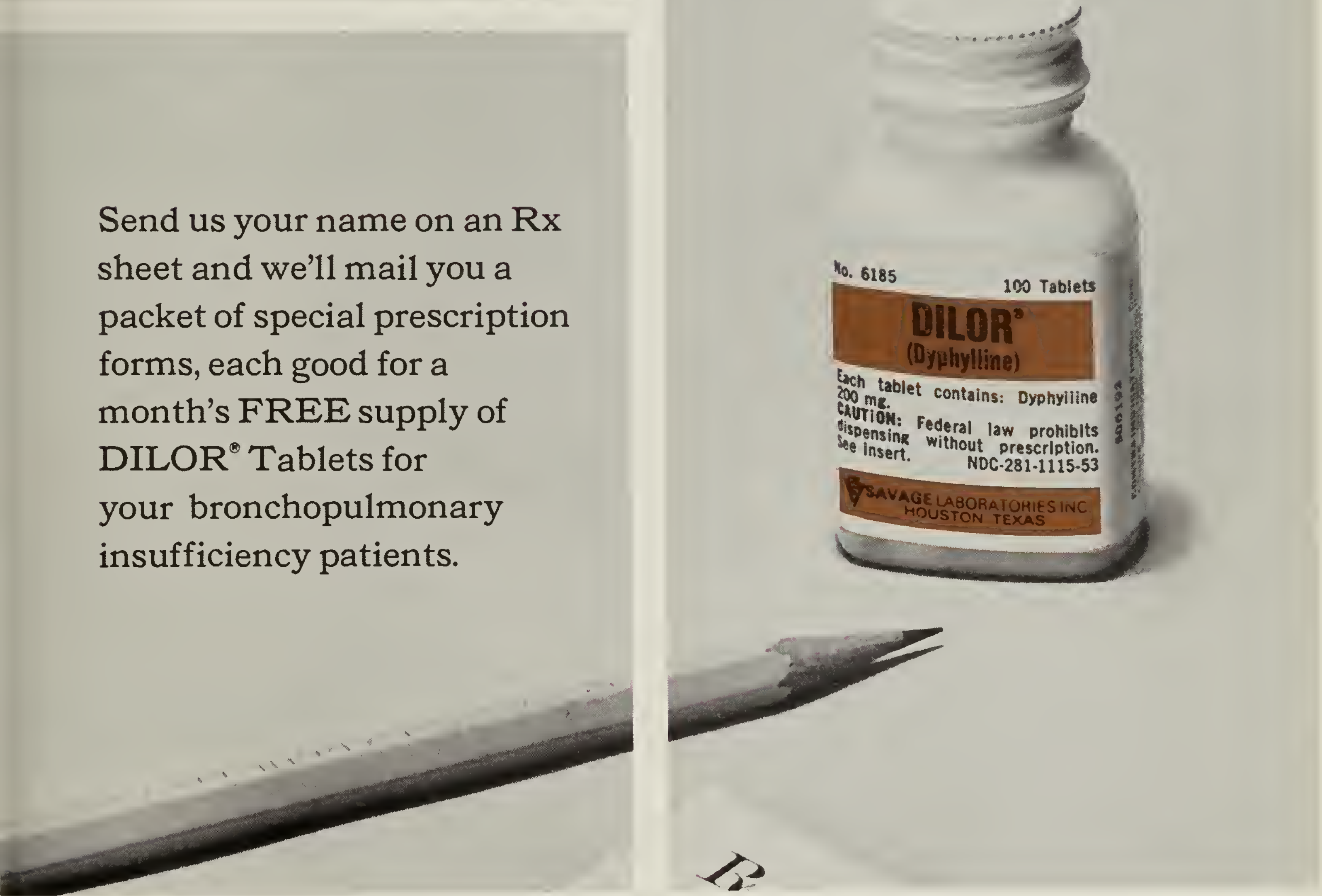
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CONTENTS: Each blue tablet contains Dyphylline 200 mg.

INDICATIONS: Bronchodilation in emphysema, asthma, bronchitis and related bronchopulmonary insufficiency conditions.

DOSAGE: Usual adult dose is 1 tablet 3 or 4 times a day. Dosage may be increased up to a maximum of 2.4 grams per day when necessary.

PRECAUTIONS: Use with caution in the presence of acute cardiac disease, severe renal and hepatic disease, severe myocardial damage, hyperthyroidism and glaucoma. Combining with sympathomimetic drugs can cause excessive CNS stimulation.

SIDE EFFECTS: High dosage for long periods may cause mild headache or slight nausea which can usually be controlled by dosage reduction.

CAUTION: Federal law prohibits dispensing without prescription.

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newsfronts

Sensitivity Training Warning Issued

Sensitivity training is so new and experimental even physicians are often unfamiliar with its concepts, techniques and goals; yet an increasing number of patients are asking for professional evaluation.

Sensitivity training comes with many other names: encounter groups, personal growth labs, T-groups ("T" for training), awareness experience confrontation groups, training laboratories, organizational development and, collectively, the human potential movement. Whatever the groups are called, the phenomenon is attracting hundreds of thousands of Americans of all ages to programs run by persons who may be either skilled professionals or rank amateurs.

The tangle of sensitivity training nomenclature suggests that not even the experts can clearly define it. It incorporates elements of psychiatry, sociology, philosophy, education, religion and community organization. Its practitioners number people from these and other fields; but depending upon his professional background and personal bias, each person who conducts a sensitivity group has a different focus.

Most sensitivity sessions share several common attributes, however. The programs are designed to place people in a group situation. Through a mixture of physical contact games and no-holds-barred discussions about each other's strengths and failures, each group member hopefully feels less constricted. He will become more open, readily able to understand himself and others.

The sensitivity training boom has come so quickly and assumes so many forms that most of the experts have been caught off guard. Neither the American Psychological Association nor the American Psychiatric Association has an official position, and the American Medical Association's council on mental health offers this middle-of-the-road viewpoint:

"Although sensitivity training is an issue of current concern, it is not an accepted part of medical practice. The council believes that the procedures employed are not well enough defined to lend themselves to objective evaluation. It urges that particular caution be taken against participating in sessions conducted by leaders who are not professionally trained and qualified, in view of reports of psychotic and neurotic sequelae."

The "therapy" sessions are gaining reputable acceptance, however. A number of major corporations enroll their executives. An Illinois high school found the training to open channels of communications between students and teachers. In Pontiac, Mich., racially tense, the school board allocated $25,000 to finance a program for parents, students, teachers and administrators. Police forces in Los Angeles, Houston and Grand Rapids, Mich., have experimented with the sessions. The Alabama Medical Center undertook an organizational program for 100 medical personnel, and the Archdiocese of Chicago approved the program in one parish to help priests and nuns communicate better with their parishioners.

Medical authorities have advised against sensitivity training for everyone, particularly in programs conducted by non-professionals. Dana L. Farnsworth, M.D., chairman of the AMA council on mental health and director of health services for Harvard University, warned: "There can be great danger for the person who has psychotic difficulties or who is involved in any sort of acute crises." As for inept session leaders, no matter how well-intentioned, Dr. Farnsworth says, "Comparison without competence soon becomes quackery."

The question of sensitivity training should be viewed as three-pronged: its problems (misguided do-gooders), its bizarre aspects (training group bums looking for thrills), and its outlook (potential for good).

Fifty-year Club Members Sought

The "Fifty-Year Club of American Medicine," located at 100 South 14th Street, Fort Smith, Ark. 72901, is recruiting throughout Pennsylvania and the nation for new members.

According to the club's secretary-treasurer, Davis W. Goldstein, M.D., the membership stands currently at 350 and new members are welcome to join at a nominal annual fee of $5.00.

During the annual meeting of the American Medical Association, the Fifty-Year Club conducts a luncheon with a noted guest speaker at the headquarters hotel.

Pennsylvania physicians who have been in practice for fifty years or more and are interested in club membership should contact Dr. Goldstein at the Fort Smith address.

Hershey Opening Delayed

A three-month delay in the opening of the teaching hospital at the Milton S. Hershey Medical Center of the Pennsylvania State University has been announced by George T. Harrell, Jr., M.D. dean and director at Hershey.

Originally scheduled to open the ground and first three upper floors in July of this year, the hospital now is expected to accept its first patients on these floors in October. "After a series of meetings with contractors, suppliers and union business agents, it has become apparent that the July date will not be met," the dean said. Two major obstacles he cited were late delivery of equipment and materials and the inability to obtain the large number of skilled tradesmen due to the great amount of construction projects under way in central Pennsylvania.

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Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

T-006A / 1/70 / U.S. PATENT NO. 3,001,910

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DIVISION OF RICHARDSON-MERRELL INC
PHILADELPHIA, PENNSYLVANIA 19144

Uggh!

Potassium iodide is an outstanding mucolytic agent[1-4] that usually tastes like rust on the rocks. Iodo-Niacin is unusual.

Few would quarrel with the mucus-liquefying value of potassium iodide in acute and chronic bronchitis, asthma and emphysema. It's outstanding in freeing mucus plugs and strings. But the taste. Uggh! Give your patient Iodo-Niacin and you give him the iodide benefits without the iodide taste. Iodo-Niacin comes in taste-free tablets. Action is rapid and well-tolerated.[5,6] All that's missing is the uggh! Good riddance.

Iodo-Niacin® Each Slosol® coated tablet contains potassium iodide 135 mg. and niacinamide hydroiodide 25 mg.

RESPIRATORY DISEASE: The use of Iodo-Niacin is indicated whenever an expectorant action is desired to increase the flow of bronchial secretion and thin out tenacious mucus as seen in bronchial asthma, and other chronic pulmonary disease. Iodo-Niacin has also proven of value in sinusitis, bronchitis, bronchiectasis, and other chronic and acute respiratory diseases where the expectorant action of iodide is desired.

RATIONALE: The signs and symptoms of pellagra, bromism, and iodism are similar in many respects and have been postulated by some investigators to be caused by the same mechanism: poisoning of coenzymes I and II. These enzymes are vital to cellular oxidative metabolism and are essential in the Krebs' cycle. Nicotinic acid is specific for the therapy of pellagra. Its use in the prevention or treatment of iodism follows from the above postulation: a source of replenishment of the pyridine ring structure in coenzymes I and II.

DOSAGE: THE ORAL DOSE FOR ADULTS IS TWO TABLETS AFTER MEALS TAKEN WITH A GLASS OF WATER. For children over eight years, one tablet after meals with water. The dosage should be individualized according to the needs of the patient on long-term therapy.

SIDE EFFECTS: Serious adverse side effects from the use of Iodo-Niacin are rare. Mild symptoms of iodism such as metallic taste, skin rash, mucous membrane ulceration, salivary gland swelling, and gastric distress have occurred occasionally. These generally subside promptly when the drug is discontinued. Pulmonary tuberculosis is considered a contraindication to the use of iodides by some authorities, and the drug should be used with caution in such cases. Rare cases of goiter with hypothyroidism have been reported in adults who had taken iodides over a prolonged period of time, and in newborn infants whose mothers had taken iodides for prolonged periods. The signs and symptoms regressed spontaneously after iodides were discontinued.

CAUTION: The causal relationship and exact mechanism of action of iodides of this phenomenon are unknown. Appropriate precautions should be followed in pregnancy and in individuals receiving Iodo-Niacin for prolonged periods.

SUPPLIED: Bottles of 100, 500 and 1,000 Slosol coated pink tablets.

REFERENCES: 1. Modell, W., ed., *Drugs of Choice*, 1968-1969, pg. 435. 2. Carryer, H. M., and Henderson, L. L.: *Postgrad. Med., 41*:612, 1967. 3. Wells. Jr., R. E.: *M. Clin. North America, 44*:5, 1960. 4. Richerson, H. B.: *Hospital Formulary Management*, (Sept.) 1967. 5. Stern, F. H:. *Psychosomatics*, Aug. 15, 1968. 6. Abrahamson, Jr., I. A., *et al.: E.E.N.T. Dig.*, July, 1968.

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newsfronts

New Temple Dean For Allied Health

The appointment of Frank L. Husted, Ph.D. as dean of the College of Allied Health Professions has been announced by Dr. Paul R. Anderson, president of Temple University, Philadelphia.

Dr. Husted is associate dean of the School of Health Related Professions at the State University of New York, Buffalo. He will join Temple on July 1.

A graduate of the University of Buffalo, where he earned his doctorate in education in 1961, Dr. Husted, 47, was director of educational studies at Philadelphia's Hahnemann Medical College and Hospital in 1965–66. After serving in the Continuing Education Branch of the National Institutes of Health, he took his present position at Buffalo in March, 1968.

To Soften the Bumpy Roads

Levity can go a long way *in the successful treatment of a lonely, frightened, hospitalized child and the Woman's Auxiliary of the Clinton County Medical Society, recognizing an opportunity to make the best of a bad situation, donated a bright red wagon with padded side slats to the pediatrics department of the Lock Haven Hospital. The wagon will be used to transport tots to and from the X-ray department.*

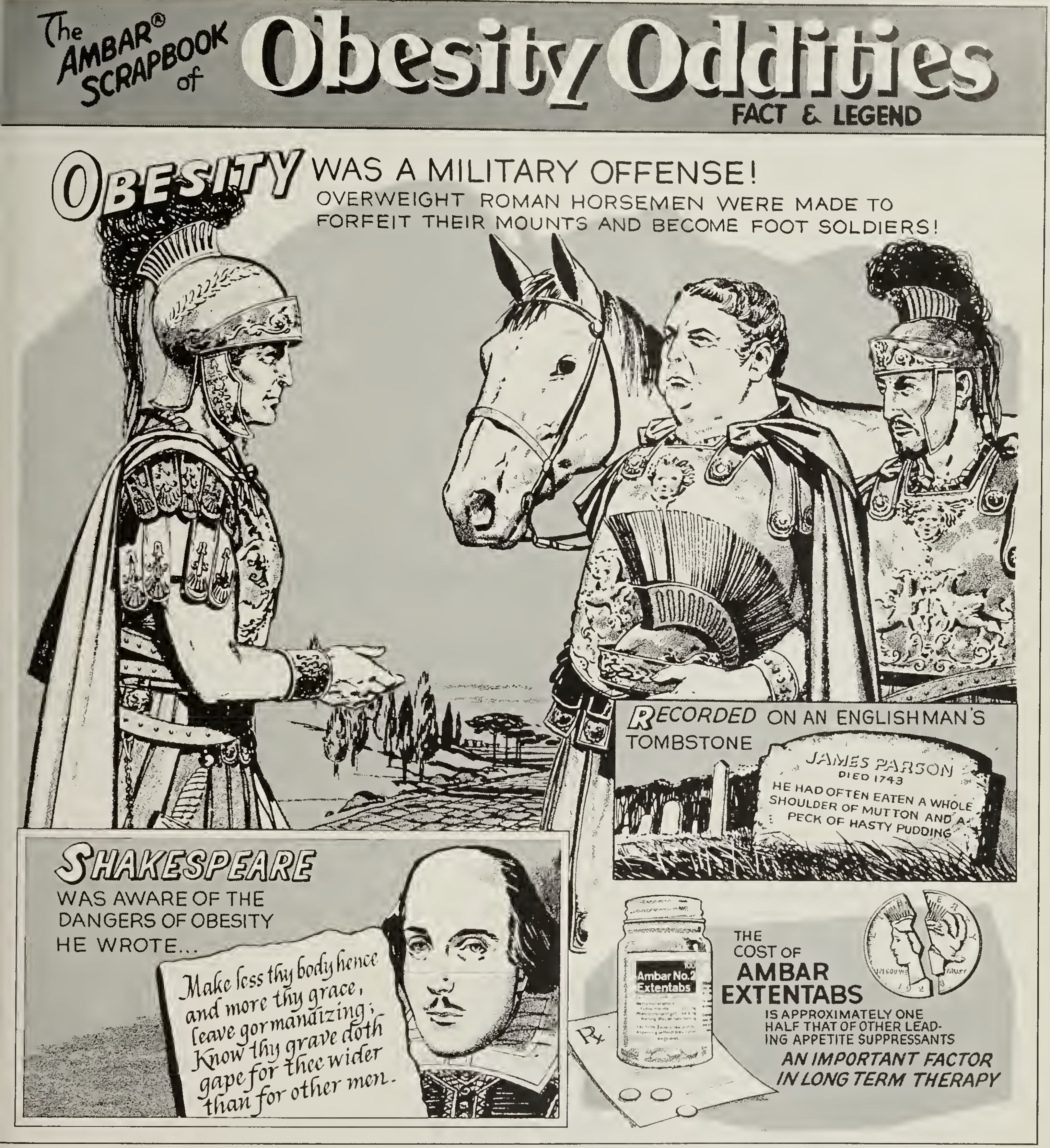
Protect Yourself And The Drug Addict

The Federal Bureau of Narcotic has prepared *Dont's for the Practitioner* to protect him from narcotic addicts and abusers.

- *Don't* leave prescription pads around; addicts may be forgers.
- *Don't* write a narcotic prescription in lead pencil, or any Rx at all in pencil as they may be changed to call for morphine.
- *Don't* write narcotics as "Morphine HT ½ # X" or "Morphine HT ¼ # 10." Several X's or zeroes can be added to raise the amount. Use brackets or spelling.
- *Don't* carry a large stock of narcotics in your bag. Addicts are often watching M.D.s' offices and cars.
- *Don't* store your office narcotic supply unprotected, especially near a sink or washroom; patients may ask to use these facilities.
- *Don't* fall for a story from a stranger claiming an ailment that usually requires morphine. The addict can produce blood sputum, simulate bad coughs or other symptoms. Make your own diagnosis.
- *Don't* give an Rx to anyone except the actual patient. Addicts have posed as nurses.
- *Don't* write for large quantities of narcotics unless unavoidable. Diversion to addicts is profitable, as much as $1.00 for ¼ grain M.S.
- *Don't* prescribe narcotics on the story that another physician has been doing so; consult that physician or hospital records.
- *Don't* leave Rx's signed in blank for nurses to fill in; many have been stolen by addicts.
- *Don't* treat an ambulatory addict. They must be under proper control; many go to several physicians at one time.
- *Don't* dispense narcotics without keeping records, although bedside and office administration is permissible.
- *Don't* buy your office narcotic needs on an Rx blank. The law requires that you use an official order form.
- *Don't* resent a pharmacist's call for verification of an Rx. He is held responsible if forgeries are filled.
- *Don't* hesitate to call an agent of the Federal Bureau of Narcotics (at your nearest federal building) or the narcotics division of the State Department of Health if the patient is suspect. Your information will be held in strict confidence.

Do not phone in a *Class A Narcotic* Rx except in true emergencies; even then, the pharmacist must have a written prescription in his or his agent's hand before he can make delivery to your patient. The pharmacist or his agent may pick up the Rx at your office or at the home before making delivery.

Violations of this section of the narcotic law may entail two to ten years imprisonment and up to a $20,000 fine for the first offense; second and third violations are more severe.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Obesity Oddities
FACT & LEGEND
OBESITY WAS A MILITARY OFFENSE!
OVERWEIGHT ROMAN HORSEMEN WERE MADE TO FORFEIT THEIR MOUNTS AND BECOME FOOT SOLDIERS!
RECORDED ON AN ENGLISHMAN'S TOMBSTONE
JAMES PARSON
DIED 1743
HE HAD OFTEN EATEN A WHOLE SHOULDER OF MUTTON AND A PECK OF HASTY PUDDING
SHAKESPEARE WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...
Make less thy body hence and more thy grace, leave gormandizing; Know thy grave doth gape for thee wider than for other men.
Ambar No.2 Extentabs
℞
THE COST OF AMBAR EXTENTABS IS APPROXIMATELY ONE HALF THAT OF OTHER LEADING APPETITE SUPPRESSANTS
AN IMPORTANT FACTOR IN LONG TERM THERAPY

CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg.,
phenobarbital 64.8 mg. (1 gr.)
(Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY,
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A·H·ROBINS

Patient Care and Law and Order at Byberry

Political protest and patient care will become not so strange bed-fellows this year, according to researchers at Philadelphia State Hospital, Byberry.

In a shift away from pills toward more concern with the total person, there will be greater interest in civil rights of patients and broader employee benefits as well as growing appreciation of the link between long-range goals in patient care and improved personnel practices.

These and other conclusions are based on a study by Dr. Ronald H. Bohr, research psychologist, and Howard M. Kaplan, sociologist, on attitudes of Byberry staff toward last summer's three-day walkout of psychiatric aides. Their paper, recently presented at the annual meeting of the Pennsylvania Sociological Society, is titled: "The New Workers in the Old Hospital: A Study of Social Conflict in a Changing Psychiatric Institution."

The study cites the contrast between older and younger non-aides as a growing generational gap in attitudes toward the need for protest and group pressure.

"Young workers were torn between personal altruism and political realism. Many organizations, not only hospitals, may have to learn to deal with a new generation of workers who see protest as an effective means for legitimate goals."

Younger, clinical personnel working directly with patients were more inclined to support the aides than older workers having little or no daily contact with mental patients, the research shows. Overall, 63 of the 174 respondents (36 per cent) reported that "they wondered whether they were doing the right thing" by doing the aides' work during the walkout.

This conflict was felt by 56 per cent of the mental health workers and 54 per cent of the social service personnel. Only 27 per cent of the registered nurses and 15 per cent of the administrative personnel felt the same doubts about their actions. In all, 70 per cent of those expressing conflict mentioned the clash between political and humanitarian values.

Seeking to achieve long-term benefits, younger workers argued that the demand for immediate patient care should not sabotage the effectiveness of the walkout. They said that patient care had never been adequate at Philadelphia State Hospital and that protest was needed to improve it.

"The call for patient care may serve the same purpose as the call for law and order, that of curtailing social change," the study states. "Thus, like civil rights protesters accused of starting 'trouble' in their efforts to correct racial injustice, many young hospital employees may find themselves charged with harming patients in their efforts at long-range reform."

The authors say their results reflect the change in Byberry Hospital from custody to care and add that emphasis on meeting immediate patient needs could mask fear and resistance to this change.

Implying that protesters are maladjusted does not solve social problems, according to Dr. Bohr. "It is possible that some activists constitute not a sick but a prophetic minority. The paranoid lives in a benign world and perceives it as evilly intentioned. Is it really a sign of mental health to live in a world that is often malevolent and see it as benign?"

The study concludes that understanding the role conflicts of workers in a situation like the walkout may "help prevent the drawing of rigid lines, the polarizing of attitudes that are still inchoate and the creation of splits in existing social systems."

Ewing's Sarcoma Patients Sought

The cooperation of physicians is requested in the referral of patients with Ewing's Sarcoma for a continuing study being conducted by the Radiation Branch of the National Cancer Institute at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Patients who have received no treatment are preferred, but selected patients with previous therapy will also be accepted for admission as inpatients. Upon completion of their studies, patients will be returned to the care of the referring physician, who will receive a summary of findings.

Physicians interested in having their patients considered for admission to this study may write or telephone: Ralph E. Johnson, M.D., Clinical Center Room B 1 B-41 B, National Institutes of Health, Bethesda, Md. 20014. Telephone: (301) 496-5457.

MRS. SCHNEIDER

Auxiliary President Is Pittsburgh's Woman of 1969

Mrs. John A. Schneider, *Mt. Lebanon, president of the Woman's Auxiliary of the Pennsylvania Medical Society, has been selected by the Pittsburgh Post-Gazette as Outstanding Pittsburgh Woman of 1969.*

Mrs. Schneider was selected for the title along with nine other women who share their time and talents for the betterment of the community.

Doctor, after all we've been through together...

abscess
acne
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anthrax
bacillary dysentery
bartonellosis
bronchitis
bronchopulmonary infection
brucellosis
chancroid
diphtheria
endocarditis
genitourinary infections
gonorrhea
granuloma inguinale
listeriosis
lymphogranuloma
mixed bacterial infection
osteomyelitis
otitis
pertussis
pharyngitis
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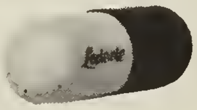
tularemia
typhus fever
urethritis

...don't you think it's time we were on a first-name basis?

call me "Achro® V"



Every pharmacist knows ACHRO® V stands for ACHROMYCIN® V

Contraindications: Hypersensitivity to tetracycline.
Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage. Upon adverse reaction, stop medication and treat appropriately.

Achromycin® V
Tetracycline

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484-9

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.

The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.

A realistic approach to pain relief

'Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

Health Insurers Pay $12.2 Million In 1969 Subscriber Benefits

A record 176 million persons in the United States owned some form of private health insurance as the new year began.

The total—an increase of more than six million over the previous year's high—represents a four per cent increase over the number of persons insured at the beginning of 1969.

These figures are provided by the Health Insurance Institute today as part of its year-end estimates of health insurance coverage in the United States.

A year ago, over 169 million people in the United States had private health insurance, and received benefits of $12.2 billion.

The latest figures bring the total number of people with private health insurance to about seven out of eight in the United States. Previously it was six out of seven.

The institute estimates that 1969 saw increases in the number of persons protected by all major forms of private health insurance.

Surgical expense, which helps pay the cost of operations, was up by more than five million people with 161 million protected by this insurance.

Medical expense insurance, which helps pay for non-surgical care by physicians, was held by 136 million people, up from 129 million.

Major medical expense insurance, the type that helps pay for virtually all care and treatment prescribed by a physician, was owned by seventy-two million persons—an increase of more than five million.

The estimates also indicated that sixty million people, an increase of nearly five million, owned short-term disability income protection as the year began. This insurance protects for up to two years. Long-term (over two years) was owned by nine million.

Disability income insurance provides a person with a regular income—usually between 50 to 60 per cent of his normal income—when he becomes ill or injured and cannot work.

$4 Million Spent For Housing Units

Contracts for nearly $4 million for housing units to be built on the campus at The Milton S. Hershey Medical Center of the Pennsylvania State University have been announced by university officials.

The 160 apartments for medical students, interns, and residents are scheduled for completion in September, 1971. They include 24 one-bedroom, 120 two-bedroom, and 16 three-bedroom units. A previous group of 88 two-bedroom apartments is already under construction for completion in June, 1970.

The apartments are financed by the university from funds which will be repaid with charges made to the occupants.

Baseball Therapeutics For Mental Patients

Converting baseball and bingo from games people play into treatment for mental patients is the purpose of an intensive twelve-week program which started at Philadelphia State Hospital Byberry, in January.

The training will have a psychiatric emphasis so that specialists in music, art, dance, drama, occupational therapy, recreation and vocational adjustment can design their programs to benefit individual patients, according to Dr. Burton Cahn, director of the PSH department of education.

"We want to make the most effective use of activities as therapeutic tools in helping patients channel their energies constructively, find healthy diversions and give us clues to their behavior and progress," he explained. "Our therapeutic activities workers, or TAWS, are already expert in their own fields. Now they need more psychiatric orientation so that they can understand what makes people tick."

A combination of classroom and clinical experiences will provide what Dr. Cahn described as an interdisciplinary mix with active participation from such hospital departments as social work, medicine, nursing and volunteer resources. Lectures, seminars and readings will include current psychiatric concepts, new patient conferences, records and statistics, and group dynamics.

As part of their training, the therapeutic activities workers will participate in sensitivity training, and will become acquainted with the various rehabilitative programs throughout Byberry Hospital such as operant conditioning, image therapy, movement therapy, family therapy, remotivation, sheltered workshops and special programs for the blind, mental retardates and geriatrics.

Course participants will rotate through each of the hospital's five units as well as through other activity disciplines. The last four weeks will be spent in their own discipline.

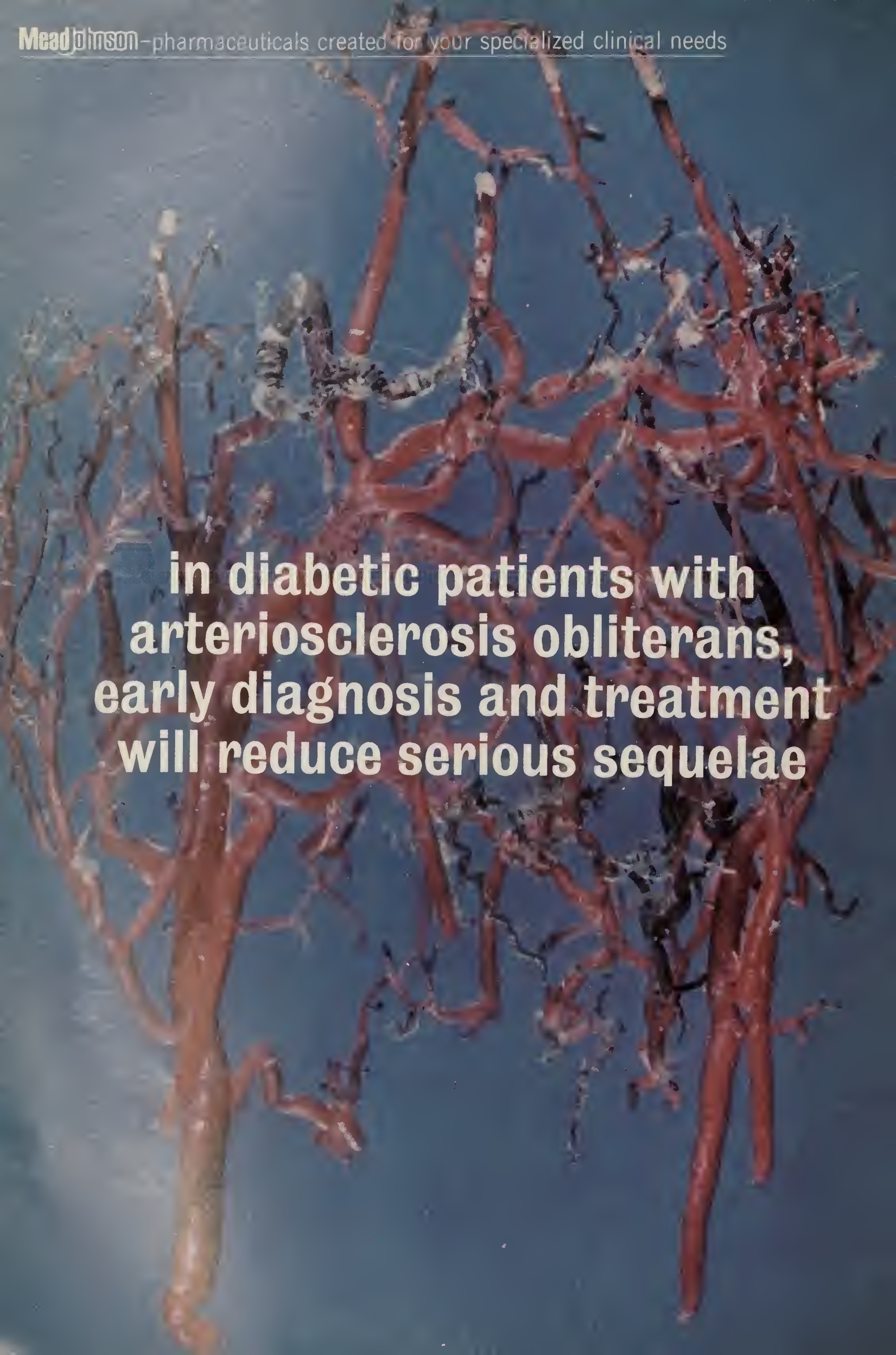
York Auxiliary On Drug Campaign

DRUGS, a new organization formed by the Woman's Auxiliary of the York County Medical Society to cope with the growing problem of drug abuse, has begun an educational campaign among youth and adults, instructing on the dangers of drugs and the common symptoms and signs produced by their use.

As a first step, the organization has assembled 200 packets of materials dealing with drugs which cause addiction, dependence and hallucinations and is distributing these packets to city and county schools and churches as an aid to teachers and parents.

Included also in the packets are film and library references, a fact sheet, and instructions on how to identify users of various drugs.

The initial effort of DRUGS was a town meeting on drug abuse held at York College in cooperation with the Junior League of York and attended by approximately 500 persons.


Mead Johnson–pharmaceuticals created for your specialized clinical needs
in diabetic patients with arteriosclerosis obliterans, early diagnosis and treatment will reduce serious sequelae

for diabetic patients with responsive arteriosclerosis obliterans

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- acts directly to relax arterial musculature
- measurably increases blood flow to deep muscle arteries[1,2]
- does not interfere with diabetic control[3]
- is not contraindicated in coronary disease or peptic ulcer[3-5]

to guide you in prescribing Vasodilan
Although not all clinicians agree on the value of peripheral vasodilators,[6-8] several investigators[4,5] have reported favorably on the effects of isoxsuprine on peripheral blood flow in skeletal muscle vessels. Effects have been demonstrated both by objective measurement[1,5,9] and observation of clinical improvement.[4,10-12]

Indications: Arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine hydrochloride 10 mg. **Dosage:** Oral—10 to 20 mg. (1 or 2 tablets) t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories.

References: (1) Stein, I.D.: Angiology *15*:1 (April) 1964. (2) New Drugs–Evaluated by the A.M.A. Council on Drugs, Chicago, American Medical Association, 1967, pp. 295-297. (3) Samuels, S. S., and Shaftel, H. E.: J. Indiana M. A. *54*:1021-1023 (July) 1961. (4) Kaindl, F.; Pärtan, J., and Polsterer, P.: Wien.klin.Wchnschr. 68:186-191 (March 16) 1956. (5) Kaindl, F.; Samuels, S. S.; Selman, D., and Shaftel, H.: Angiology *10*:185-192 (Aug.) 1959. (6) Myers, K. A.: Modern Treatment *4*:370-383 (March) 1967. (7) Gillespie, J. A.: Angiology *17*:280-288 (May) 1966. (8) Smit, Arne, F., *et al.*: Nordisk Medicin *20*:1260, 1959. (9) Samuels, S. S., and Shaftel, H. E.: JAMA *171*:142-145 (Sept. 12) 1959. (10) Frieh, C., and Olivier, L.: Lyon Med. *91*:891-896 (May 24) 1959. (11) Weghaupt, Von K.: Wien.klin.Wchnschr. 69:31-32 (Jan. 11) 1957. (12) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960.

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Microphoto of occluded vessels in gangrenous area of a first toe amputated because of severe arteriosclerosis obliterans. Cast was made by injecting acrylic plastic into the vessels. *Used with permission. Courtesy of Margaret C. Conrad, Ph.D., Department of Physiology, Bowman-Gray School of Medicine, Wake Forest College, Winston-Salem, N. C.*

Hershey Medical Zeroes In On "Total Man"

Teaching medical students in four years the "art of medicine" that usually takes a physician perhaps twenty years to develop by experience is the goal of a unique fellowship program being started at The Milton S. Hershey Medical Center of The Pennsylvania State University.

The combined behavioral science-family medicine fellowship is being financed by a two-year, $42,000 grant awarded by the Family Health Foundation of America, an arm of the American Academy of General Practice.

The "art of medicine" can be described as the physician's ability to merge his knowledge of the biological sciences with the social sciences when treating the individual patient. In the past, medical schools have offered little or no teaching in the social sciences and their relationship to medical science and the delivery of medical care.

When planning the new Penn State medical school at Hershey in 1964, Dean George T. Harrell announced three unique departments would be formed: humanities, behavioral science and family and community medicine. By focusing the teaching of medicine on the fact that disease strikes people, who live in families, which are part of communities, these departments emphasize that medical practice is tied to social and cultural forces and human values as well as to scientific precepts of biology and chemistry. The dean puts it succinctly, "the practice of medicine with the individual patient is an art built on a scientific base."

In discussing the program, Thomas L. Leaman, M.D., chairman of the family and community medicine department, called the area of human behavior "one of the exciting frontiers of medicine today. It is being explored academically by behavior scientists and practically by family physicians. In one sense, behavioral science is the theoretical area of family medicine," he said. In practice for over 20 years, he estimates that at least one half of the people seen in his office present problems that are more emotional or social than organic.

Dr. Leaman continued: "What the practicing physician calls the 'art of medicine' behavioral science is analyzing and teaching in a more didactic way. Meanwhile the family physician is hindered in his attempts to teach students what has taken him many years to learn by experience, and the behavioral scientist is hindered by his lack of personal involvement in such a prolonged learning experience."

The other department chairman involved is Evan G. Pattishall, M.D., professor and chairman of behavioral science who holds a Ph.D. degree in educational psychology as well as an M.D. degree. "We are trying to show the student how behavior often can be viewed by the physician as his major clue, long before the laboratory tests, to what is going on both inside and outside the organism or the patient's internal and external environments."

A young family physician interested in an academic career is being sought by the school to work under the fellowship. He will spend about a third of his time seeing patients and the rest taking part in the regular behavioral science teaching programs. He will then devise teaching and research programs which would more effectively translate the experience of a family physician into a teachable behavioral science program. Such a person then should be prepared to continue in an academic program in either discipline at a time when most medical schools are experimenting with curricular changes, especially in behavioral science and family medicine.

Behavior is the clue to what is going on inside and outside the organism of the patient's internal and external environment.

At Hershey behavioral science is organized as a basic medical science on the same level as the traditional fields of anatomy, biochemistry, physiology, etc. Taught throughout the four years, it is designed to show that behavior covers a wide range of normal reactions and involves a combination of social, psychological and biological factors common to all basic and clinical science disciplines, not just psychiatry.

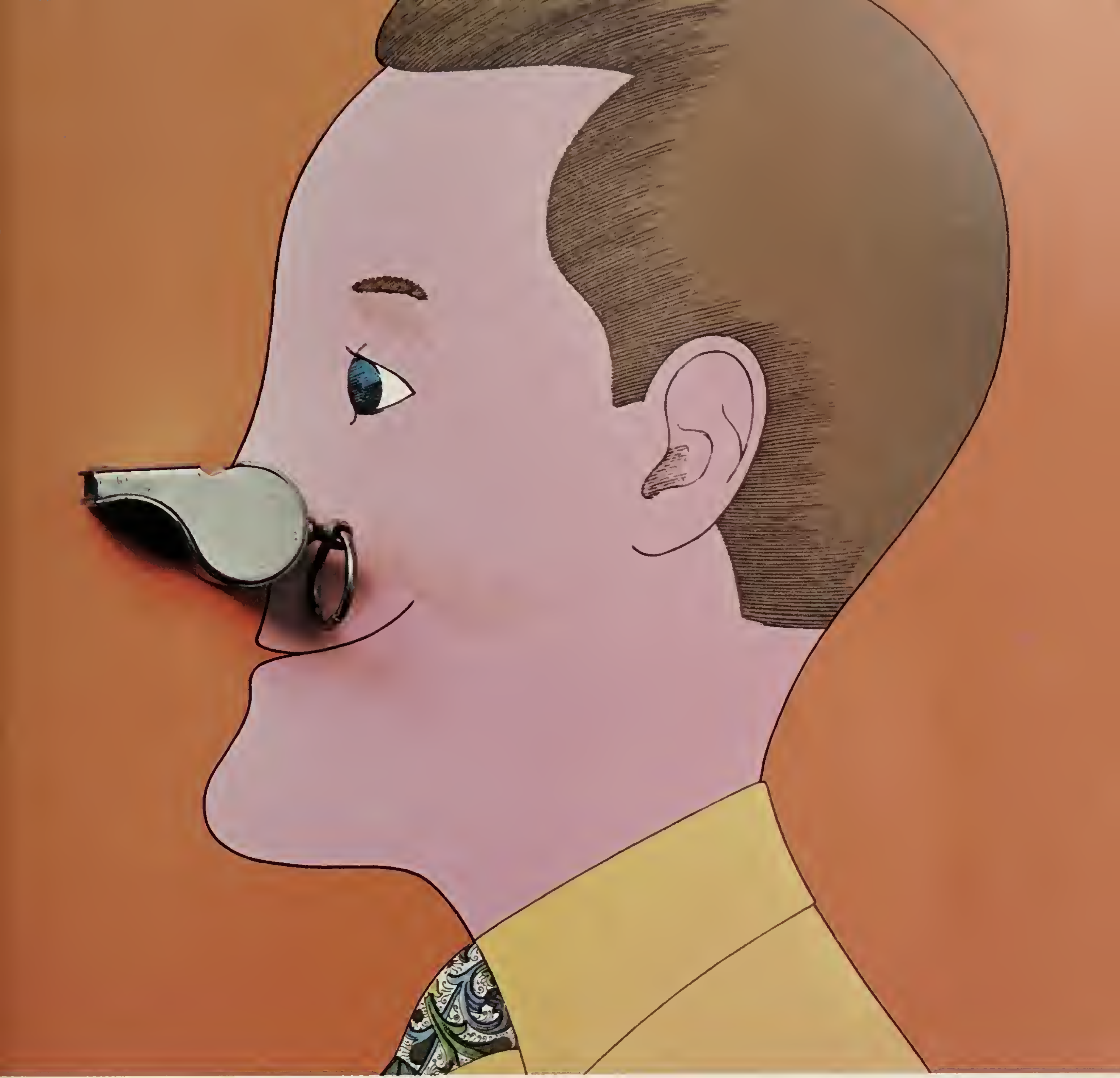
The family and community medicine department consists of five physicians who provide the students with an intimate, realistic, experience in family medicine. Now full-time faculty members, the physicians continue to see patients from the previous private practice of Dr. Leaman that has now grown to some 1,700 families and 5,000 people in the community. They see the patients in a private office-like setting in the Medical Sciences Building while teaching at the same time. Each student is assigned a family which he first meets in the home during the first week of school. He then follows all its members for four years and whenever anyone in the family has an appointment or is seen by the physician for an emergency, the student is notified and leaves his other work.

The teaching program of the two departments already overlap and are interdependent in many ways. The department of behavioral science helps each student study his family in depth. Family medicine also provides other patients for discussion in the regular behavioral science classes. The family doctors also conduct weekly correlation conferences with patients to demonstrate how the various basic science factors emerge in particular clinical problems.

Dr. Pattishall feels his department should gain valuable insight into the nature of family practice and the various aspects of a patient-doctor relationship and that teaching innovations devised by the fellowship should enrich the program considerably.

"Family medicine, as a newly recognized specialty discipline, should gain most of all," said Dr. Leaman. "Much of what is now taught only as broad ideas could be condensed, defined, re-defined and made more meaningful.

"Since better care of people is the ultimate goal of everyone in the health professions, any effort toward understanding people and imparting this understanding to our students must be our greatest concern," Dr. Leaman concluded.



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Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

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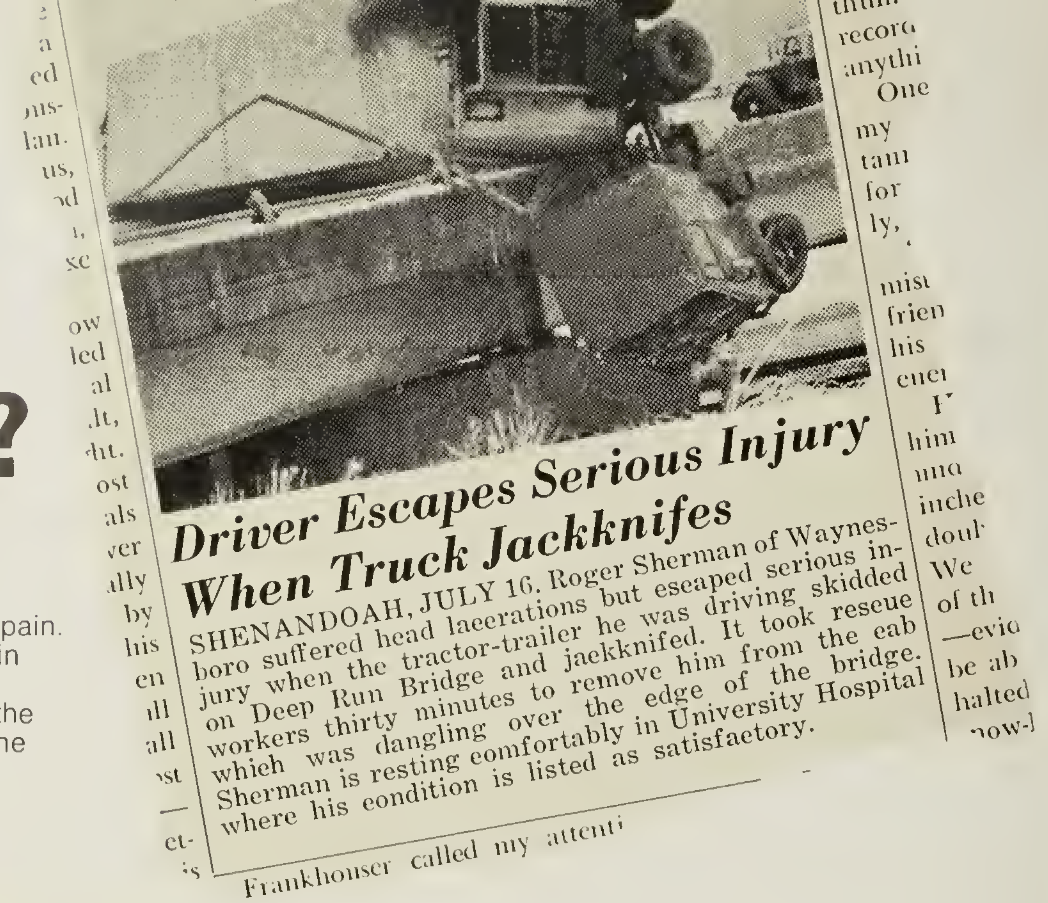
Hasn't the driver had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.



Driver Escapes Serious Injury When Truck Jackknifes

SHENANDOAH, JULY 16. Roger Sherman of Waynesboro suffered head lacerations but escaped serious injury when the tractor-trailer he was driving skidded on Deep Run Bridge and jackknifed. It took rescue workers thirty minutes to remove him from the cab which was dangling over the edge of the bridge. Sherman is resting comfortably in University Hospital where his condition is listed as satisfactory.

Frankhouser called my attenti

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg. Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg. Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. Contraindications: Hypersensitivity to any of the components. Precautions: As with all phenacetin-containing products excessive or prolonged use should be avoided. Side effects: Side effects are uncommon, although nausea, constipation and drowsiness may occur. Dosage: Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

A. H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

"Charge to Graduates"

delivered by

ERIC A. WALKER

President, The Pennsylvania State University

University Park, Pennsylvania

September 11, 1969

Ladies and Gentlemen of the graduating class and those who got advanced degrees, let me extend to each of you my personal congratulations and those of the entire University on the degree you have earned today.

This ceremony marks the completion of an important phase of your life. It is an occasion in which all who know you can share in your sense of pride and accomplishment. But no one has more pride in your accomplishment than the older generation. But I am not going to tell that older generation how bright you are. Nor am I going to say we have made a mess of things and you—the younger ones—are the hope of mankind. I would like to reverse that process. For if you of the graduating class will look over into the bleachers to your left or right, I will re-introduce you to representatives of some of the most remarkable people ever to walk the earth. People you might want to thank on this graduation day. These are people you already know—your parents and grandparents. And, if you will bear with me for five minutes, I think you will agree that a remarkable people they are indeed. Let me tell you about them.

Not long ago an educator from Northwestern University by the name of Bergen Evans, a radio performer known to your parents, got together some facts about these two generations—your parents and grandparents. I'd like to share some of these facts with you.

These—your parents and grandparents—are the people who within just five decades—1919-1969—have by their work increased your life expectancy by approximately 50 per cent—who while cutting the working day by a third, have more than doubled per capita output.

These are the people who have given you a healthier world than they found. And because of this you no longer have to fear epidemics of flu, typhus, diptheria, smallpox, scarlet fever, measles or mumps that they knew in their youth. And the dreaded polio is no longer a medical factor, while TB is almost unheard of.

Let me remind you that these remarkable people lived through history's greatest depression. Many of these people know what it is to be poor, what it is to be hungry and cold. And because of this, they determined that it would not happen to you, that you would have a better life, you would have food to eat, milk to drink, vitamins to nourish you, a warm home, better schools and greater opportunities to succeed than they had.

DR. WALKER

Because they gave you the best, you are the tallest, healthiest, brightest, and probably best looking generation to inhabit the land.

And because they were materialistic, you will work fewer hours, learn more, have more leisure time, travel to more distant places, and have more of a chance to follow your life's ambition.

There are also the people who fought man's grisliest war. They are the people who defeated the tyranny of Hitler, and who when it was all over, had the compassion to spend billions of dollars to help their former enemies rebuild their homelands. And these are the people who had the sense to begin the United Nations.

It was representatives of these two generations, who through the highest court of the land, fought racial discrimination at every turn to begin a new era in civil rights.

They built thousands of better teachers, and at the same time made higher education a very real possibility for millions of youngsters—where once it was only the dream of a wealthy few.

And they made a start—although a late one—in healing the scars of the earth and in fighting pollution and the destruction of our natural environment. They set into motion new laws giving conservation new meaning, and setting aside land for you and your children to enjoy for generations to come.

They also hold the dubious record for paying taxes—although you will probably exceed them in this.

While they have done all these things, they have had some failures. They have not yet found an alternative for war, nor for racial hatred. Perhaps you, the members of this graduating class, will perfect the social mechanisms by which all men may follow their ambitions without the threat of force—so that the earth will no longer need police to enforce the laws, nor armies to prevent some men from trespassing against others. But they—those generations—made more progress by the sweat of their brows than in any previous era, and don't you forget it. And, if your generation can make as much progress in as many areas as these two generations have, you should be able to solve a good many of the world's remaining ills.

It is my hope, and I know the hope of these two generations, that you find the answers to many of these problems that plague mankind.

But it won't be easy. And you won't do it by negative thoughts, nor by tearing down or belittling. You may and can do it by hard work, humility, hope, and faith in mankind. Try it.

PENNSYLVANIA MEDICINE special report

Disposition of Items

referred to the

Pennsylvania Medical Society Board of Trustees

by the

1969 PMS House of Delegates

1. **Resolution 69-9: Study and Evaluation of the Educational and Scientific Trust's projects (Official Reports Booklet, Page 126)**

> "WHEREAS, The voluntary contribution of physicians to scholarship funds has proved to be a worthwhile and effective program in enabling students to pursue the study of medicine; and
> "WHEREAS, We believe that a reevaluation of such scholarship programs is necessary; and
> "WHEREAS, Problems in other areas have been equally as important; therefore be it
> "RESOLVED, That the Pennsylvania Medical Society conduct a study and evaluation of the use of the funds presently in the Educational and Scientific Trust to determine the feasibility of utilizing a portion of these funds to provide, on a loan basis, funds to general practitioners which would enable them to establish practices in the rural areas of Pennsylvania."

The Chairman of the PMS Board of Trustees wrote to James Z. Appel, M.D., chairman, Educational and Scientific Trust, and requested that the trust study the recommendations contained in this resolution and report back to the Board at its earliest convenience. The trust has conducted a survey among medical students now receiving aid from PMS—classes of 1969 and 1970—regarding the proposal to loan trust funds to general practitioners to assist them in establishing practices in rural areas of Pennsylvania.

2. **Resolution 69-28: Implementation of House Actions (Official Reports Booklet, Page 131)**

> "WHEREAS, Many Resolutions are passed by the House of Delegates of the Pennsylvania Medical Society at its Annual Session; and
> "WHEREAS, There is a need for the delegates to be kept informed on the implementation of such resolutions; therefore be it
> "RESOLVED, That the Pennsylvania Medical Society establish a Committee with the following functions:
> 1. To make certain that, after referral of resolutions to the appropriate committees and councils of the Pennsylvania Medical Society by the House of Delegates, that the results of the reference committees' studies have been reported back to the house; and
> 2. To keep informed as to the status of implementations of resolutions by the House of Delegates."

The House of Delegates accepted the recommendation of the Reference Committee on Reports of Officers and rejected Resolution 69-28. While the house defeated Resolution 69-28 it accepted the reference committee report which included a commitment from the Board of Trustees to provide county medical societies with periodic reports concerning the implementation of adopted resolutions.

3. **Amended Resolution 68-17: Computer Systems.**

> "WHEREAS, The Department of Welfare, Commonwealth of Pennsylvania, under a 1966 Act, No. 598, Section IX, requires private medical facilities, private and public psychiatric facilities, and certain other related facilities to submit detailed data on patients including their name and Social Security Number; and
> "WHEREAS, The rapid development of computer storage and retrieval facilities enhances greatly the opportunities for non-therapeutic use of such information; and
> "WHEREAS, The use of computers for therapeutic research purposes in the field of medicine generally is rapidly increasing without guidelines, therefore be it
> "RESOLVED, That the Pennsylvania Medical Society seek the results of the studies being conducted

by the American Medical Association on computer technology, with particular reference to privileged communications and the use of medical data stored by non-medical agencies; and be it further

"RESOLVED, That these materials be considered by the appropriate Council or Committee with a view toward recommending appropriate action to the Board of Trustees and House of Delegates."

The Chairman referred this amended resolution to the Judicial Council for review because of the ethical overtones involved. The council has queried the AMA regarding its studies of computers and privileged communications. In addition, the council is conducting its own research on the subject and will report to the 1970 house.

4. **The house accepted a recommendation by the Reference Committee on Medical Service that each hospital medical staff be urged to develop and expand its capability to handle peer review.**

The Chairman referred this recommendation to the Council on Medical Service. The Council on Medical Service has requested the Western Pennsylvania PMS—Blue Cross Regional Steering Committee to correspond with each hospital medical staff in western Pennsylvania to transmit the above recommendation. The council is also developing other means of communicating this action to hospital medical staffs in other areas of the state.

5. **Resolution No. 69-8: Reporting of Conditions Leading to Safety Hazards (Official Reports Booklet, Page 126)**

"WHEREAS, Physicians are being called upon more and more to approve the physical condition of individuals and assess their capacity to function in a safe manner; and

"WHEREAS, This is more evident in the driver examination program in Pennsylvania and in the certifying examination prescribed by the Federal Aviation Administration; and

"WHEREAS, Legislation has been in force for some time requiring physicians to report gunshot wounds and conditions which would be indicative of child abuse; and

"WHEREAS, Physicians from time to time see patients involved in occupations involving the safety of others; and

"WHEREAS, In the examination of these individuals, conditions may come to light, which in the opinion of the physician could create a hazard for those individuals whose safety depends upon the patient; therefore be it

"RESOLVED, That the Pennsylvania Medical Society seek legislation which will permit physicians to report conditions which in their opinion would adversely affect the patient's normal occupational function."

"Your reference committee considers favorably the intent of this resolution. However, it does involve obvious legal implications that must be carefully considered."

"The reference committee therefore recommends that Resolution 69-8 be referred to the Board of Trustees and Councilors for consultation with legal counsel."

The Chairman referred this matter to the Council on Governmental Relations, which is seeking an opinion from legal counsel before recommending any action.

6. **Resolution 69-10: Education for Ambulance Personnel (Official Reports Booklet, Page 126)**

"WHEREAS, The need for transportation of the ill and injured will increase as our present medical system drifts towards centralization; and

"WHEREAS, All ambulances should carry updated practical medical equipment and the attendants should be instructed in current first aid procedures as recommended by the National Academy of Sciences—National Research Council; and

"WHEREAS, Many ambulance personnel appear eager for more training when it is arranged and presented; and

"WHEREAS, Most past instructors for ambulance personnel have been individual interested physicians; and

"WHEREAS, Present and future ambulance instruction programs can conceivably include the starting of infusions; and

"WHEREAS, There is a necessity for study and discussion of the legal problems involved in instructing ambulance attendants on an annual basis; therefore be it

"RESOLVED, That the Pennsylvania Medical Society encourage all county medical societies to assume the responsibility of helping update the first aid instruction of all ambulance attendants operating in their area on an annual basis."

The Chairman referred this resolution to the Council on Education and Science for its recommendation on the most effective manner in which it may be implemented. Resolution 69-10 is now being considered by the Commission on Emergency Medical Services.

7. **Amended Resolution 69-21: Support of Practical Nursing (Official Reports Booklet, Page 129-130)**

"WHEREAS, Licensed Practical nurses are prepared within a carefully structured educational program; and

"WHEREAS, Graduates of schools of practical nursing throughout the country are required to take State Board examinations to measure their competency; and

"WHEREAS, Upon successful completion of such examinations, licenses to practice are issued to graduates of schools of practical nursing; and

"WHEREAS, Licensed practical nurses are recognized by United States physicians as reliable and competent paramedical personnel; therefore be it

"RESOLVED, That the Pennsylvania Medical Society lend every support to the cause of practical (Vocational) nursing, to licensed practical nurses, and to the schools and faculties that prepare them in the Commonwealth of Pennsylvania."

The Chairman referred this resolution to the Council on

Education and Science. Amended Resolution 69-21 was under consideration by the Advisory Committee on Manpower and Allied Professions on February 12, 1970.

8. **Amended Resolution 69-23: Acute Alcoholism (Official Reports Booklet, Page 130)**

> "WHEREAS, Alcoholism is a serious public health problem; and
> "WHEREAS, It is estimated that there are 7 million persons, or 5% of the adult population suffering with alcoholism in the United States; and
> "WHEREAS, The National Safety Council indicates that alcohol is a factor in more than 50% of fatal motor collisions and in a high percentage of industrial accidents; and
> "WHEREAS, Many communities lack adequate facilities for the care of alcoholics; therefore be it
> "RESOLVED, That the Pennsylvania Medical Society continue its efforts toward encouraging all community hospitals to meet the medical needs of acute alcoholics; and be it further
> "RESOLVED, That in addition to developing detoxification centers for the care of acute and chronic alcoholics, communities and the appropriate Pennsylvania health agencies should be encouraged to develop rehabilitation centers."

The Chairman referred this resolution to the Council on Education and Science. The Commission on Mental Health/Mental Retardation plans, in the near future, to send a letter to all community hospitals urging them to establish medical and detoxification services for alcoholics and also will encourage the appropriate health agencies and comprehensive mental health centers to develop rehabilitation facilities.

Regulations for Radiation Protection

Pennsylvania Department of Health

This is a report on the last and near-final draft of the proposed amendments to the Rules and Regulations, Article 433, Regulations for Radiation Protection of the Commonwealth of Pennsylvania Department of Health.

On December 11, 1969, the Advisory Committee on Atomic Energy Development and Radiation Control of the Commonwealth of Pennsylvania Department of Health approved the "Proposed Amendments to the Rules and Regulations, Article 433, Regulations for Radiation Protection." It is expected that with minor changes this document will be finally approved in early February for submission to the legislature. This document represents a major revision of Article 433, mainly due to the fact that Pennsylvania is to become an "agreement state" under agreement with the United States Atomic Energy Commission under Section 274B of the Atomic Energy Act of 1954 as amended (73 Stat. 689) and the Atomic Energy Development and Radiation Control Act, the Act of January 28, 1966, Public Law (1965) 1625. The major impact of the amendments will be that licenses for the use of most radioactive materials used by the medical field will now be issued by the Commonwealth of Pennsylvania, rather than by the Atomic Energy Commission. Pennsylvania thus joins some twenty other states which have become agreement states since 1954. In general, the requirements for licensing are essentially the same as those put forth by the Atomic Energy Commission; however, from the experiences in other states, the procurement of a license to use radioactive materials will be simpler and more expeditious under state control. The language of the amendment is considerably different from the previous language of Article 433 because of the need for fitting into the format of the requirements of the Atomic Energy Commission as an agreement state. Despite this fact, the amendment still relies strongly upon recommendations of the National Council on Radiation Protection as set forth in National Bureau of Standards handbooks and the more recent NCRP handbooks.

There are several points within the amendment which will be of interest to radiologists within the State of Pennsylvania. The major items are listed below with comments:

1. Sections A.5. and A.6. provide for inspections of radiation facilities at all reasonable times by representatives of the Department of Health and also provide that the department may instruct persons within radiation facilities to conduct "such reasonable tests as the department deems appropriate or necessary." Actually, the major change represented by these sections is that these provisions are now written into the regulation rather than being implied.
2. Subchapter B of Article 433 extends the requirement for registration of radiation-producing machines or equipment as previously required. The amendment states that radiation-producing machines or equipment shall be registered within 30 days after acquisition and each four years thereafter. This represents a minor change from the previous requirement. Also written into this subchapter are requirements for notification of the department of Health within 10 days after the transfer or disposal of a radiation-producing machine or equipment. Under this subchapter all vendors of radiation equipment must notify the Department of Health quarterly of the perons or organizations to whom they have sold, leased, transferred or lent equipment.
3. Subchapter C of the amendment lists several types of licenses which are available for the use of radioactive materials by individuals and institutions. Included are all the types of licenses previously available through the Atomic Energy Commission, including licenses of broad scope.

4. Subchapter D entitled "Standards for the Control of Radiation Exposure" pertains to all radiation sources and specifically spells out the responsibilities of licensees or registrants under Article 433. Also included are permissible levels of radiation for both restricted and unrestricted areas. These permissible levels are essentially the same as recommended by the Atomic Energy Commission and the NCRP. A minor change in this subchapter is listed in Section D.9. and spells out the individuals who should be supplied with personnel monitoring devices. Under the old Article 433, anyone who was expected to receive an exposure of greater than 50 millirems per week was required to be badged or monitored. Under the amended article, persons in restricted areas expected to receive doses greater than 750 millirems per calendar quarter require monitoring. If the individual is 18 years of age or under, he requires personnel monitoring if he is expected to receive a dose in excess of 150 millirems per quarter. Also included in Subchapter D are requirements requiring notification of incidents to the Department of Health. These requirements are essentially in line with those stated by the Atomic Energy Commission and previously by the Department of Health.
5. Subchapter E pertains to human use of radiation-producing machines or equipment and represents very little deviation from recommendations of the NCRP as set forth in NCRP Report #33. Some significant modifications are that image intensification must be provided on all mobile fluoroscopes, radiation therapy machines must be calibrated at least once every calendar year, and radiation protection surveys must be carried out prior to the use of all radiation installations.
6. Subchapter F entitled "Human Use of Sealed Sources" includes some additions to Article 433 which will be of significance to radiologists. First, it is required that a physical inventory be made every six months with a written record for all sealed sources. Also, standards are set for incidental exposure of nurses, visitors and other patients to radiation from sealed sources which are in place in patients. The permissible dose for these individuals is set at 300 millirems per calendar quarter and 500 millirems per year. Leak testing of all sealed sources, including radium, must be carried out every six months. This represents a modification from the previous Article 433 in that radium sources could previously be leak tested annually.
7. Subchapter G pertains to special requirements for industrial radiographic operations and does not pertain to medical uses.
8. Subchapter H includes "Additional Requirements for Certain Types of Radiation Sources." Included in this subchapter are requirements for analytical X-ray operations such as X-ray diffraction installations and electron microscopes. Also included is a section on accelerations which will pertain to medical linear accelerators. Another section of Subchapter H pertains to veterinary medicine radiation installations.

All in all, the amended Article 433 will impose little hardship on the radiologist and actually will make it simpler for him and other interested specialists to obtain licenses for uses of radioactive materials. Requirements, responsibilities, and procedures are more specifically spelled out and this should again be a favor to the radiologist. The new Article 433 has drawn upon regulations of the Atomic Energy Commission and recommendations of the National Council on Radiation Protection and actually represents little change to the individual who was previously governed by either or both of these requirements.

It is anticipated that the amended Article 433 will take effect some time in the first half of 1970.

JACK S. KROHMER, Ph.D.
Radiation Physicist
Member of the Standards
and Protection Committee
Pennsylvania Radiological Society

The Meaning of True Grit

You're only four
nd you fall on the floor,
ause your legs aren't working right

ou're weary and teary
nd mad and sad
rom fighting the punishing fight

he floor gives a jump
nd your bones come down *bump!*
hen the Easter Seal Lady says, "Please"

but you keep on trying,
keep right on trying
to raise yourself up off your knees.

So it's snuffle the nose,
and knuckle the eye,
the battle is just begun;
then give it another bloody try-
you've got true grit, my son.

We help crippled kids find true grit

Easter Seal Fund Appeal

Address: "Crippled Children," c/o Your Local Postmaster

PENNSYLVANIA MEDICINE

close-up/MD's

Raymond C. Grandon, M.D., *right, secretary of Pennsylvania Medical Society congratulates* **David A. Smith, M.D.,** *newly installed president of Dauphin County Medical Society at its recent officers' installation ceremony held in Harrisburg. Dr. Smith is associate medical editor of* Pennsylvania Medicine.

Leon A. Frankel, M.D., Philadelphia, received a certificate of appreciation for an exhibit presented at the Second Western Hemisphere Conference of the American College of Surgeons held in Montreal, Canada. The exhibit was titled: "Mirror Image Operation in Primary and Revisionary Gastric Surgery."

Samual B. Hadden, M.D., Philadelphia, recently gave a series of seminars to the Air Corps Psychiatric Services at Lackland Air Force Base, San Antonio, Tex. Following the seminars he attended the Twenty-seventh Annual Conference of the American Group Psychotherapy Association in New Orleans. Dr. Hadden is past-president of the association.

Dominic Donio, M.D., Allentown, director of rehabilitation at Sacred Heart Hospital, and a physician for thirty-five years, was honored recently at a testimonial dinner attended by 400 of his friends, relatives and professional associates. Among the numerous awards and presentations were the Star of Solidarity of the Italian government, the papal blessing, an award from the Boy Scounts of America and a special presentation from the Lehigh Valley Physical Therapists. These awards, and others, were presented to Dr. Donio for his devotion to numerous good causes and to his profession through the years.

Among the Pennsylvanians who will participate in the Sectional Meeting for Doctors and Nurses of the American College of Surgeons, March 16 through 18, 1970, in Washington, D.C., are: **Daniel W. Elliott, M.D.,** Pittsburgh; **Stanley J. Dudrick, M.D.,** Wynnewood; **Robert C. Bunts, M.D.,** Philadelphia; **Dwight C. Hanna, M.D.,** Pittsburgh; **Henry P. Royster, M.D.,** Philadelphia and **William S. Blakemore, M.D.,** Philadelphia.

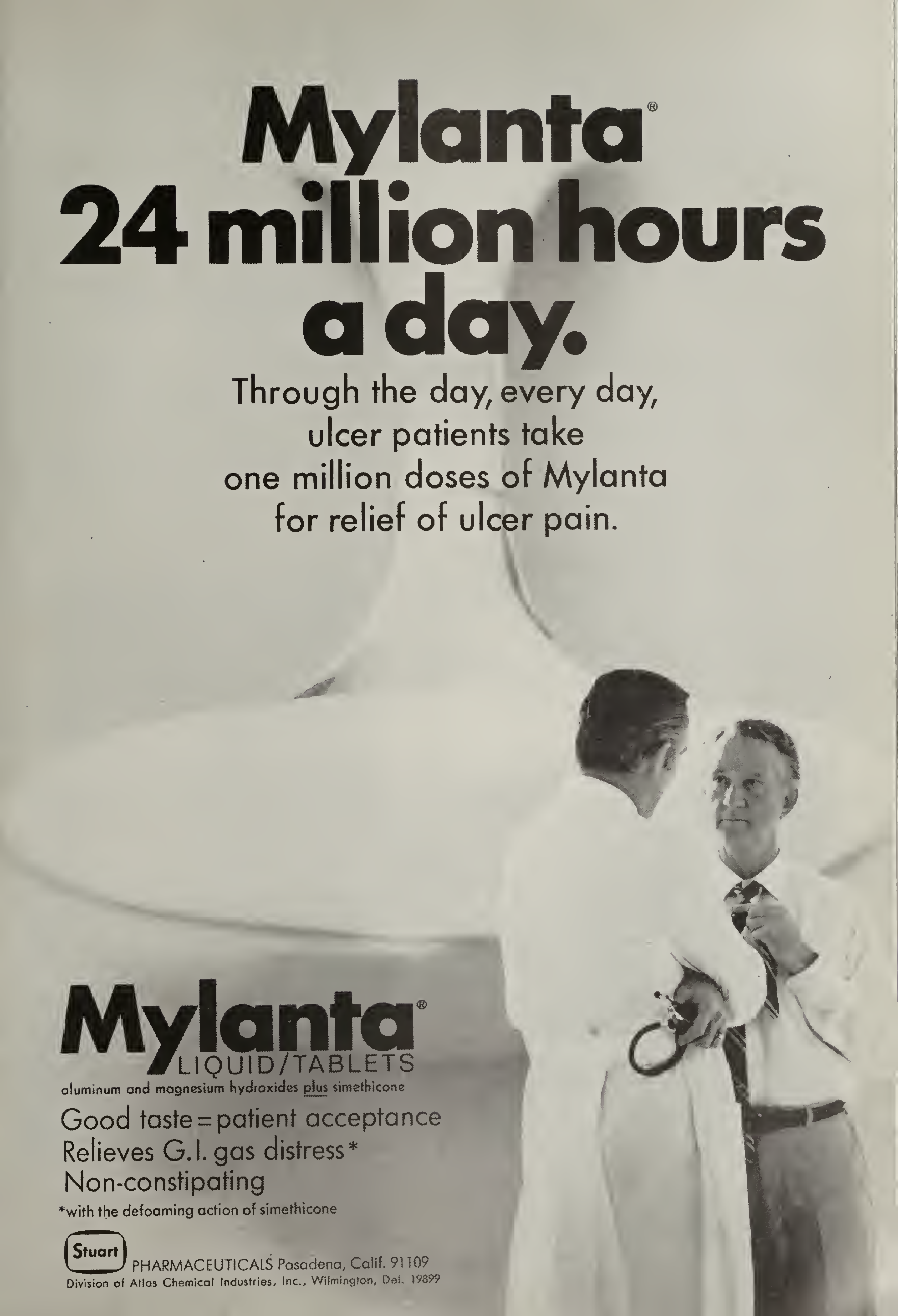
James Edwin Wood, M.D., Philadelphia, has been named director of the department of medicine of Pennsylvania Hospital. His appointment was announced by the hospital concurrently with an announcement from the Medical School of the University of Pennsylvania that he has been named professor of medicine.

Charles C. Wolferth, Jr., M.D., has been named professor and chairman of the department of surgery of the Hahnemann Medical College and Hospital of Philadelphia. Associated with Hahnemann since 1962, Dr. Wolferth has been associate professor of surgery, chief of the Hahnemann surgical unit at Philadelphia General Hospital and acting chairman of the department.

The appointment of **Thomas W. Georges, Jr., M.D.,** as associate vice president for community health care services and community affairs has been announced by Dr. Paul R. Anderson, President of Temple University.

Dr. Georges had been secretary of public welfare of the state of Pennsylvania since July, 1967, and acting state secretary of health. He has been on leave of absence since 1966 from Temple University School of Medicine, where he is adjunct professor of community medicine. The appointment was effective January 9, 1970.

(Continued on Page 36.)



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close-up/MD's

Two staff members at The Children's Hospital of Philadelphia recently traveled abroad to participate in scientific meetings or teaching activities. **Alfred M. Bongiovanni, M.D.**, physician-in-chief, was visiting professor at the University of Pahlavi, Shiraz, Iran, from December 10 to January 5. He is William H. Bennett professor and chairman of the department of pediatrics at the University of Pennsylvania School of Medicine. **Peter J. Koblenzer, M.D.**, associate dermatologist, delivered a lecture before the Infant Hygiene Symposium in Paris, December 4 and 5. Dr. Koblenzer is an associate in dermatology at the University of Pennsylvania School of Medicine and holds the same position in pediatrics at the University's Graduate School of Medicine.

Mohammed Jaffari, M.D., has been appointed Director of the Department of Physical Medicine and Rehabilitation at Episcopal Hospital, Philadelphia. Born in Tehran, Iran, he was graduated from Tehran University School of Medicine, and has taken extensive postgraduate training in the United States, including one year of approved rotating internship at Woman's Hospital, Detroit, Mich.; three years of approved residency training in orthopedic surgery and crippled children at the Baroness Erlanger Hospital, Chattanooga, Tenn.; three years of approved fellowship training in arthritis and rheumatism at the University of Alabama Medical Center, Birmingham, Ala.; and two years of approved residency training in physical medicine and rehabilitation at New York University Medical Center.

Richard P. Custer, M.D., has been named senior member of The Institute for Cancer Research, Philadelphia, Director **Timothy R. Talbot, Jr., M.D.**, announced. As pathologist, he will be available to conduct studies on tissues submitted by other departments of the institute, and to pursue his own research. Since joining the institute, much of his work has been in collaboration with **Beatrice Mintz, M.D.**, concerning tumors and anemias in her allophenic mice, and in a "blind" evaluation of liver biopsies from patients who have been tested for Australia antigen by **Baruch Blumberg, M.D.**, who has been working on isolating the virus which causes hepatitis. Dr. Custer is professor of pathology at the University of Pennsylvania School of Medicine, and has been a member of the faculty since 1929.

Thomas M. Durant, M.D., of Philadelphia, is the author of one of seven articles on the pharmaceutical industry in a special issue of *Modern Medicine*.

Dr. Durant is professor of medicine at Temple University and chairman of the division of medicine, Albert Einstein Medical Center. His article in the symposium covers the interrelationship of the government, the academic medical community and the pharmaceutical industry.

William M. Sanders, M.D., has been appointed an associate in the department of psychiatry at the Geisinger Medical Center, according to an announcement by **Leonard F. Bush, M.D.**, chief of staff. Since 1967, Dr. Sanders has been a Fellow in Psychiatry at the Mayo Clinic, Rochester, Minn. He also served two years as a psychiatrist at the Maxwell Air Force Base in Albama. Prior to his fellowship at the Mayo Clinic, he was a partner in general practice for two years in Ashland, Ala.

William I. Gefter, M.D., of Wynnewood, has been elected president of the Medical Board at Episcopal Hospital where he has been director of the department of medicine since 1966.

Newly elected president *of the York County Medical Society,* **Robert Feldmann, M.D.,** *center, plans for 1970 with other officers of the society, who were elected in January. Left to right are* **Treasurer William Shue, M.D., Vice-president Thomas M. Hart, M.D., Second Vice-president Arthur Crovatto, M.D.,** *and* **Secretary H. Malcolm Read, M.D.** *The society is made up of 224 York County physicians, of which 191 are on the staff of York Hospital.*

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URISED is not a dramatic "wonder drug" but a useful one that has served the medical profession for more than fifty years. You can rely on URISED; it has gained the confidence of physicians who have written more than one million prescriptions for their patients.

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PRECAUTIONS: Administer with caution to persons with known idiosyncrasy to atropine or cardiac disease.

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Methenamine . . .40.8 mg.
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Phenyl Salicylate .18.1 mg.
Benzoic Acid . . . . .4.5 mg.

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to help your patients open mucus-clogged airways

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4th ANNUAL SYMPOSIUM on SPORTS MEDICINE

AUGUST 13-14, 1970

EDITOR'S NOTE: The April, 1970, edition of PENNSYLVANIA MEDICINE will feature several of the original papers presented at the 3rd Annual Symposium on Sports Medicine at Germantown Academy in August, 1969.

close-up/MD's

WELCOME, NEW MEMBERS!

These M.D.'s have joined the State Society in recent months:

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Klaus M. Bron, M.D., Presbyterian-University Hospital, Pittsburgh 15213.

David T. Carboy, M.D., 632 Jenkins Bldg., Pittsburgh 15222.

Roger L. Duerksen, M.D., 433 Denniston Ave., Pittsburgh 15206.

George M. Fitting, Jr., M.D., 1400 Locust St., Pittsburgh 15219.

Neal Gansheroff, M.D., Apt. F 17, 3245 Beechwood Blvd., Pittsburgh 15217.

Jane A. Gerneth, M.D., St. Francis General Hospital, Pittsburgh 15201.

Najm M. Gharavi, M.D., Columbia Hospital, Pittsburgh 15221.

Stephen R. Gluck, M.D., 3500 Fifth Ave., Pittsburgh 15213.

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Edward L. Hall, M.D., 104 W. Patty Lane, Monroeville 15146.

Barry C. Harris, M.D., Presbyterian University Hospital, Pittsburgh 15213.

Anibal W. Herrera, M.D., 8358 Ohio River Blvd., Pittsburgh 15202.

Narayan Kslavathi, M.D., Allegheny General Hospital, Pittsburgh 15213.

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Vincent A. Drapiewski, M.D., 130 A Gateway Dr., Edwardsville 18704.

PENNSYLVANIA MEDICINE

editorials

An Evaluation of Brain Scanning

Brain scanning has been tried and approved. Detection of intracranial mass lesions is accomplished with a high degree of accuracy—greater than 75 per cent, in most published reports. And the procedure is virtually without danger. Positive scans are also accurate and useful in stroke patients with cerebral infarcts. Serial scans are often useful in the differential diagnosis and prognosis of these patients.

We are proud to present in this issue (page 45), an evaluation of 2420 cephaloscans done in the Section of Nuclear Medicine of the Harrisburg Hospital. The authors report that of their large series, there were eight false negative and four false positive scans. This is a gratifying degree of accuracy.

It is worthy of note, however, that the brain scan is not a "test" which automatically gives an unequivocal diagnosis and prognosis. Correlation with all possible available data is essential if the doctor is to get the most benefit for his patient from brain scanning.

A most interesting feature of the report from Dr. Jackson and Miss Blosser is the fact that 119 of the 2420 scans were reported as questionable. Final evaluation had been carried out on eighty-three of these and in no case was a questionable brain scan associated with the presence of intracranial disease. In short, the nuclear medicine specialist must avoid the tendency of all specialists to overread.

More and more hospitals are developing nuclear medicine facilities. The evaluation of brain scanning in this issue amply justifies this.

CBL

God and the Doctor

For the sake of the practitioner of medicine, God had better not be dead, and if He has withdrawn from these parts and is living in Argentina, as has been rumored, the situation is no better.

Our concern with the survival and location of the Deity does not arise because we have assumed the role of the theologian but because of the conviction that the patient's attitude, commitment and dedication to God and to religion is important to the doctor's management of the medical problem of the person who consults him. The patient's religion must be taken into account in any medical care of the whole man, both as regards the direct care of the illness and as regards its psychosomatic effect. In this, we need cooperation and understanding between physician and clergyman.

The physician's own religious beliefs and his religious commitment are also of importance in the practice of medicine, although they may be nebulous, unformulated, conceivably agnostic or atheistic. The physician must know himself in order to give full service to the patients he attends. He must have some sort of formulated attitude toward the body-and-spirit constitution of his patient, in order to make the proper approach to the medical problem. This is in part necessary because, whatever his own beliefs, he must work with the patient *as he is* and must accept the human individual as he presents himself, and with respect for his beliefs.

Most patients have a more or less firm adherence to one or another organized religious community, at least, at the time when they see life threatened or face a considerable period of illness or a significant limitation of capabilities. In such relationships, the physician can obtain much benefit for his patient if the clergyman involved has had training and experience in dealing with the sick and disabled, and if he has gained some insight into the doctor's difficult tasks and frequent dilemmas.

Medicine and religion, as a special relationship, has been a concern of organized medicine, with considerable cooperation from organized religion, for many years. This month is devoted to our interest in and deepening concern with this relationship. We invite wider and deeper participation in this serious, possibly transcendental subject.

With better understanding by the clergyman of the problems of medical practice we can look to better results from our patient management in a substantial number of cases. And with the physician committed to take into account "things unseen" as well as "things seen," his own therapy will be enhanced and his future patient relationship will be bettered because of better understanding among doctor, patient and clergyman.

CBL

Are You Hippie or Concerned?

Dissatisfied people come in two main types—those who act and those who just complain. Progress depends on the active ones.

The two main types wear a variety of faces—positive and negative thinkers, boosters and doubting Toms, workers and alarmists, and the like.

The agin'ers were not always wrong but they had nothing much to take credit for. Their main use was in seeing that we carried along all that was best of the past as we move ahead. They were unpopular because they slowed the pace of change, but they saw no reason to change their ways.

Now we have gone into an age of dissent, with youth leading the way, and the contrast has become much clearer. The hippies are here, defying, ridiculing, cursing just about everything that we do or care for, and offering nothing to replace it.

They're an ugly bunch, with their bare feet, brazen manners and bawdy talk. But, there is something more than filth that we should see in them. For here is idle protest in full bloom—uninhibited, purposeless and all-consuming.

Here, for the solid citizen to see as he grouses about the town square with no intention of becoming politically active himself, is the ultimate condition of those who abandon all sense of personal responsibility for what goes on in the world around him. Here is the place indicated by those who say "to-hell-with-it."

Of course, very few members of the medical profession will wind up in Hippieland. We are inoculated against the disease infecting that place. We care about our society. That's why we are organized. But, isn't there a little bit of hippie in many of us?

What about the doctor who withdraws from the problems of his profession or of his community—who tends to pull farther back, in anger and confusion, the worse a problem grows? Legislation detrimental to organized medicine is an example. The medical society may have a position on a particular House or Senate bill, or could easily take one with a little support. But, all too often, the member who does the fiercest talking about the legislative problem is on the sidelines telling the others that what they are trying to do about it won't work.

The hippie is like that. He thinks we are hypocrites; that our ways are shams, full of injustice, demeaning to man's free spirit and deserving of his contempt, but he won't turn his hand to try to improve anything. He just wants to be counted out of it . . . all the way out.

Every community has someone whose answer to local congestion, pollution, delinquency, poor schools and bad politics is to take refuge in their pads in the suburbs, confining their constructive interests to building backyard barbeques and improving the golf handicaps. These men certainly don't live like hippies, but aren't they under the same kind of an escapist influence as the bearded ones?

Sure, these same men belong to the medical society, but that doesn't make them part of the effort of the medical community. Hippies join up with kindred souls in communes, too, but nothing of any use to the world comes from their kind of association. They gang up to share the shirking.

Better worlds are built by men who come together in working teams, with each willing to do his share.

That is how your county and state medical societies try to operate. Internally, the goal is 100 per cent membership participation. They must settle for less, largely because there is a touch of hippie in so many of us.

How much is in you? Why not test yourself?

Ask yourself what is there about your society that you don't like.

What do you do besides complain about it?

Does your society have a program that includes making improvements? If so, are you taking an active part? If not, are you urging that such a program be started?

Don't waste your professional indignation.

Put it to work!

Editor's Note: To correct an oversight, it should be known that the February, 1970, issue of Pennsylvania Medicine devoted to the pharmaceutical industry featured on the front cover a painting by artist Dean Cornwell, entitled "Father of American Pharmacy." The beautiful painting of William Procter, Jr., who founded the American Pharmaceutical Association was provided to Pennsylvania Medicine for reprinting by Wyeth Laboratories, Philadelphia.

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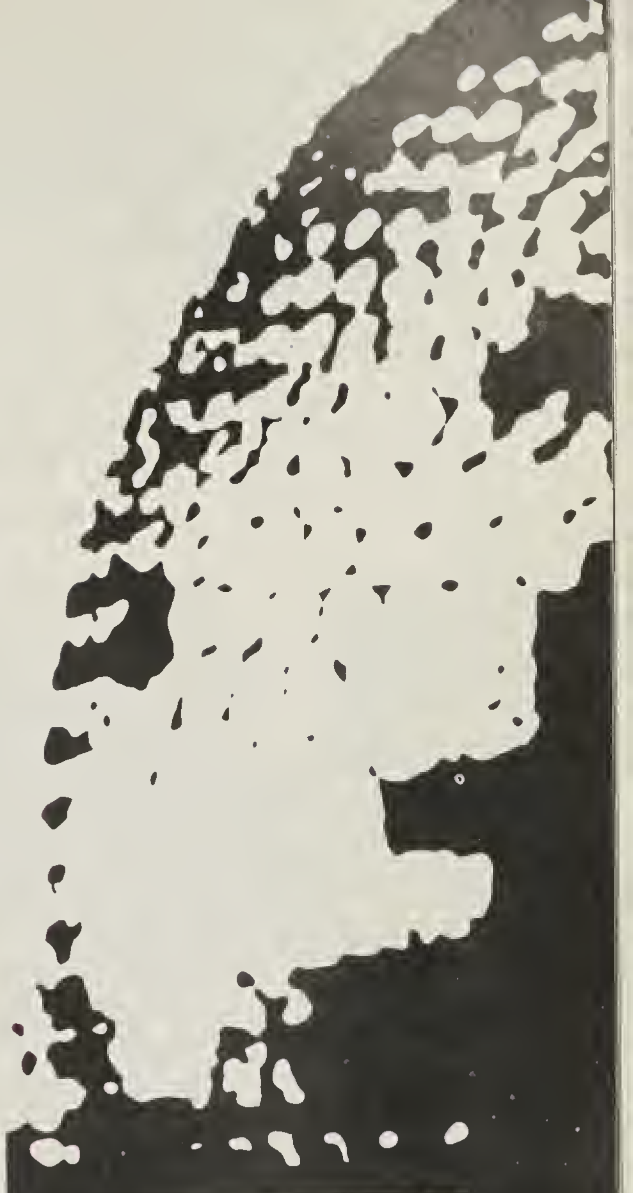

Brain Scanning: AN EVALUATION

GEORGE L. JACKSON, M.D.
NANCY M. BLOSSER, R.T.
Harrisburg

In 1946 the first shipment of radioactive materials for medical use left Oak Ridge, Tennessee. In the intervening twenty-three years many fascinating developments have marked the meteoric rise in popularity of this specialty. One of the more outstanding of these developments has been brain scanning.

At the Harrisburg Hospital each department submits a monthly summary outlining the quality of care. The summary of the Section of Nuclear Medicine is in the form of a cumulative statistical review of total procedures performed in that month, in that hospital year, and since the opening of the laboratory. Concurrently, a report of the clinical diagnoses and charts of the patients studied is conducted by one of the trained medical secretaries. These reports are reviewed by the professional staff of the section. Since some of the patients studied in our laboratory are referred from other institutions, the records of these patients also were examined. As this evaluation has proceeded, we have been impressed by the small number of non-conforming brain scan reports. This represents the substance of this report.

Method

All patients referred to the Section of Nuclear Medicine, Harrisburg Hospital,

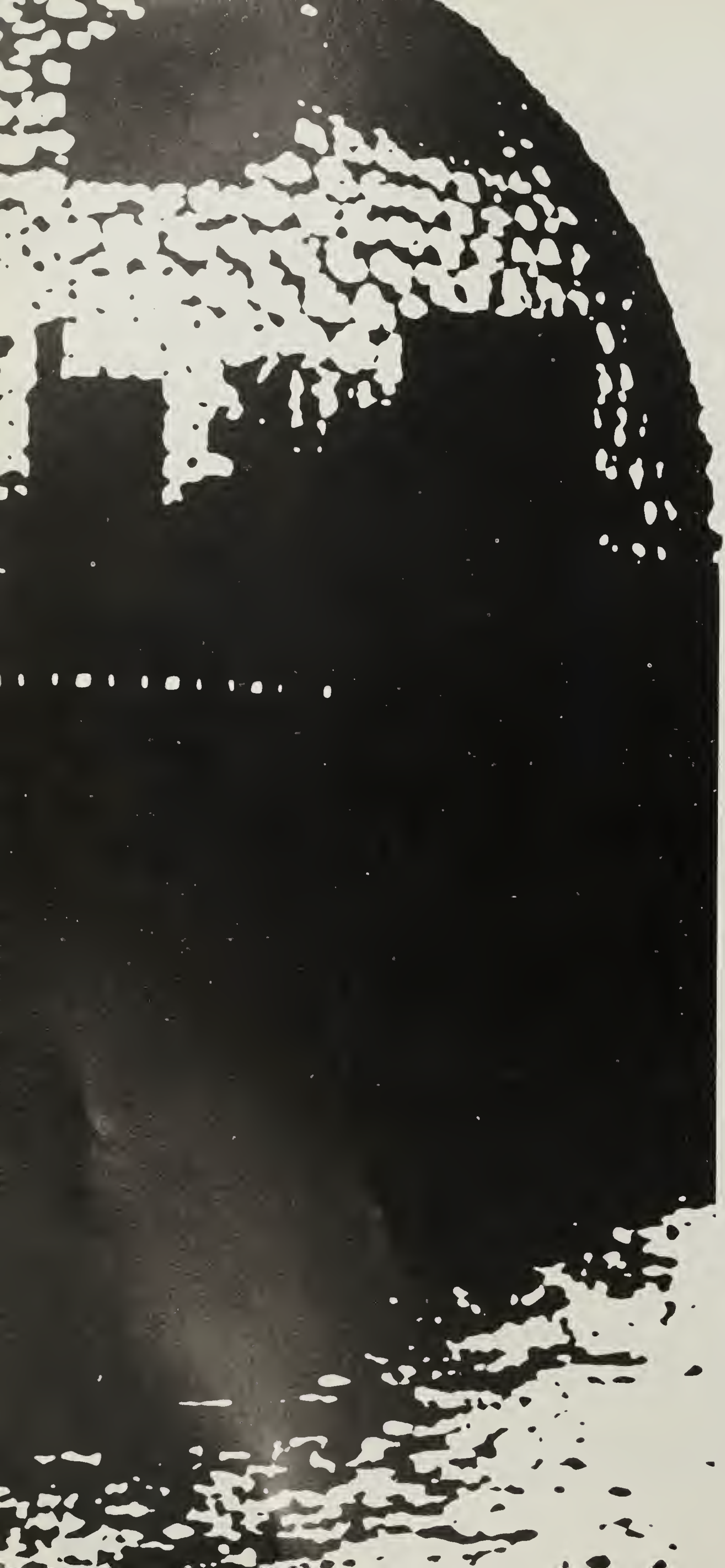

TABLE I:

Pt. Id #	Nuclide
40	Hg.
477	Hg.
640	Hg.
888	Hg.
1196	Hg.
1229	Hg & Tc
1251	Hg.
1426	Hg.
1623	Hg & Tc
2097	Hg.
2112	Hg & Tc
2275	Hg & Tc
530	Hg.
1385	Hg.
1239	Hg.
1715	Hg.

for brain scanning from 1963 until October 21, 1969, are included. 2,889 scans were performed on 2,549 patients.

Brain scans have been performed using the following agents:

1. 203-Hg. Chlormerodrin
2. 197-Hg. Chlormerodrin
3. 99m-Tc Pertechnetate
4. 131-I Serum Albumin

FALSE NEGATIVE BRAIN SCANS

Diagnosis	*Location*	*Size*
Glioblastoma Gr. IV	Right Parietal Lobe	"Large"
Meningioma	Right Frontal Lobe	2 × 1.4 cm.
Craniopharyngioma	Pituitary	2.5 × 1.5 cm.
Tumor	Posterior Fossa	Not reported
Astrocytoma Gr. I to II	Right Temporal Lobe	>2 cm.
Medulloblastoma	4th Ventricle	"Considerable"
Meningioma	Left Temporal Lobe	Not reported
Metastasis from Lung	Right Temporal Lobe	No surgery
Chromophobe adenoma	Pituitary	No surgery
Chromophobe adenoma	Pituitary	No surgery
Fibrillary Astrocytoma	Right Frontal Lobe	>8 × 7 × 2 cm.
Glioblastoma Multiforme Grade III	Right Frontal Lobe	Not reported
Subdural Hematoma	Left Frontal Lobe	Not reported
Intracerebral Hematoma	Right Temporal Lobe	Not reported
Bilateral Subdural Hematoma	...	Not reported
Acoustic Neuroma	Right Cerebellar Pontine Angle	Not reported

The majority of these studies have been performed using 203-Hg. Chlormerodrin. The second most frequently used agent is 99m-Tc.

For 203-Mercury Chlormerodrin brain scanning, a 1 cc/70 Kg. dose of stable chlormerodrin is administered intramuscularly the night before the study. 203-Mercury Chlormerodrin (10 uCi/Kg) is administered intravenously two and one-half hours prior to the brain scan. Two views are performed if an abnormality is clearly identified. In general, three views (anterior, right lateral, and left lateral) are performed. In approximately one third of the patients, a four-view (including posterior projection) brain scan is performed.

99m-Tc (Pertechnetate) scanning is performed following the administration of perchlorate (200 mg. orally) in order to prevent concentration in the choroid plexus. One hour later the technetium is given intravenously. One hour following this the brain scan is performed using views as described previously for 203-Mercury brain scanning.

With 197-Hg. Chlormerodrin a technique similar to that described for 203-Hg. Chlormerodrin scanning is utilized.

For 131-I Serum Albumin brain scanning a preliminary dose of saturated solution potassium iodide to block subsequent thyroidal accumulation of radioiodine is administered. Following antecubital vein administration of the nuclide the patient is returned to his room. Twenty-four hours later the scan is performed. The views performed are similar to those described previously.

The equipment used is either a 3 by 2-inch sodium iodide (Thallium activated) rectilinear scanner, or a Digital Autofluoroscope (Model 5600). This latter has 294 sodium iodide (Thallium activated) crystals in a rectangular array six inches by nine inches.

The information obtained after discharge includes the following: clinical history, laboratory findings (L.P., etc.); X-ray reports (particularly emphasizing skull x-ray, cerebral arteriography, pneumocncephalography); operative findings; discharge diagnosis; histologic examination of biopsy or surgical specimens.

The brain scan reports are in three groups:

1. Normal
2. Abnormal
3. Questionable

Results

Of the 2,549 patients studied, 2,113 were reported as having normal scans; 314 as abnormal; and 122 as questionable. Of this total 1,693 have completed a final evaluation. This group is subdivided into 1,356 normals; 242 abnormals; and 95 questionables.

Of the patients in whom a normal brain scan was reported, 15 were found to have a final diagnosis or other supporting data indicating that an abnormality was present which should have been identified by brain scanning (false negative). An additional patient had clinical findings which suggested that an abnormal scan should have been found (#2097 clinical diagnosis of a chromophobe adenoma; contrast x-ray studies including pneumoencephalography, and cerebral arteriography were negative; ^{60}Co therapy given). See Table I.

In patients reported to have an abnormal scan, 4 were found to have no central nervous system disease at the time of discharge diagnosis. On review of the charts no other data was found which would confirm the presence of intracranial disease. On review of these scans at the time of this re-evaluation all four were found to have subtle changes as contrasted to obvious or outstanding ones. 203-Hg. Chlormerodrin was the agent used for all 4 of these scans. In at least 2 patients (#1234 & 1482) the 203-Hg. scan demonstrated a lesion which was not demonstrated by 99m-Tc.

Among the 122 questionable brain scan reports, final evaluation indicates that one of these patients probably had a metastatic brain tumor. The Technetium scan was questionable two weeks after a normal Mercury brain scan.

Discussion

In this review of 1,693 patients in whom brain scans were performed and evaluation completed, the following conclusions are validated:

a. 16 false negative brain scans were found.
b. 4 false positive brain scans were reported.
c. 1 questionable brain scan was associated with the presence of intracranial disease.

Thus, in these patients a total of twenty false positive or false negative reports were found. This represents an inaccuracy of approximately 1 per cent in this total series or 7.8 per cent of all patients known to have central nervous system disease which should have been "seen" (20.255). Correlation with reports in the literature would indicate an accuracy greater than 75 per cent. The diagnostic accuracy is greatest in meningioma, glioblastoma, and metastatic carcinoma.[7] Witcofski, et. al.[8] report an 81.5% accuracy in diagnosis of proved neoplasms with Technetium. Quinn[6] reports a similar result—83 per cent accuracy. Bucy[1] reports 76 per cent accuracy. When an equivocal group is added the percentage rises to 86 per cent.

Dr. Jackson is head of the Section of Nuclear Medicine at Harrisburg Hospital. He served his residency at the Hospital of the University of Pennsylvania, where he received his medical degree. He is associate professor of medicine at Hahnemann Medical College, Philadelphia. Miss Blosser is certified by the American Registry of Radiologic Technologists in the specialty of nuclear medicine. She is administrative assistant in the section at Harrisburg Hospital.

Croll[2] compared 99m-Tc and 203-Hg. and reports diagnostic accuracy varying from 77 per cent to 80 per cent. Neeley[4] compared 131-I Serum Albumin with Chlormerodrin and reports 78 per cent accuracy.

Overton[5] compared 197-Hg. and 203-Hg. He reports on the basis of the first 100 consecutive tumors that 77 per cent were positively localized and with equal accuracy.

Glasgow[3] analyzed 179 brain scans in 152 patients with cerebral infarction. Lesions judged to be large by clinical criteria gave a high percentage of positive scans with a peak of 95 per cent during the second and third weeks after infarction.

Finally, it should be noted that this type of evaluation does not identify the patient with a slow-growing tumor, who presents with a single seizure at which time specialized diagnostic studies are negative. Years later as this lesion enlarges a correct diagnosis may be made.

Summary

This retrospective analysis of 1,693 patients having brain scans at the Harrisburg Hospital indicates that one questionable report was associated with the presence of intracranial disease. False positive reports were rendered in four patients; false negative reports in sixteen.

REFERENCES

1. Bucy, P. C., and Ciric, I. S.: Brain Scans and Diagnosis of Brain Tumors, J.A.M.A., 191: 93–443, 1965.

2. Croll, M. N., Brady, L. W., Faust, D. S., Kazem, I., Antoniades, J., and Tatem III, H. R.: Comparison Brain Scanning with Mercury-203 and Technetium 99m. Radiology 90: 747–749, 1968.

3. Glasgow, J. L., Currier, R. D., Goodrich, J. K., and Tutor, F. T., Brain Scans of Cerebral Infarct with Radioactive Mercury, Radiology 88: 1086–1091, 1967.

4. Neeley, J., Jr., Dehner, J. R., and Reese, I. C.: Clinical Comparison of Two Agents Used in Brain Scanning—Radioiodinated Serum Albumin versus Chlormerodrin Mercury-203; J.A.M.A., 189: 230–264, 1964.

5. Overton, M. C., III, Snodgrass, S. R., and Haymie, T. P.: Brain Scans in Neoplastic Intracranial Lesions—Scanning with Chlormerodrin-203 and Chlormerodin Mercury-197. J.A.M.A., 192: 747–751, 1965.

6. Quinn, J. L., III, Ciric, I. S., and Hauser, W. N., Analysis of 96 Abnormal Brain Scans Using Technetium 99m (Pertechnetate Form) J.A.M.A., 194: 157–160, October 11, 1965.

7. Wagner, H. N., Jr.: Principles of Nuclear Medicine, Published by W. B. Saunders, Co., Philadelphia, 1968, page 676.

8. Witcofski, R. L., Maynard, C. D., & Roper, T. J.: A Comparative Analysis of the Accuracy of the Technetium 99m Pertechnetate Brain Scan Follow-up of 1000 Patients, J. of Nuclear Medicine, 8: 187–196, March, 1967.

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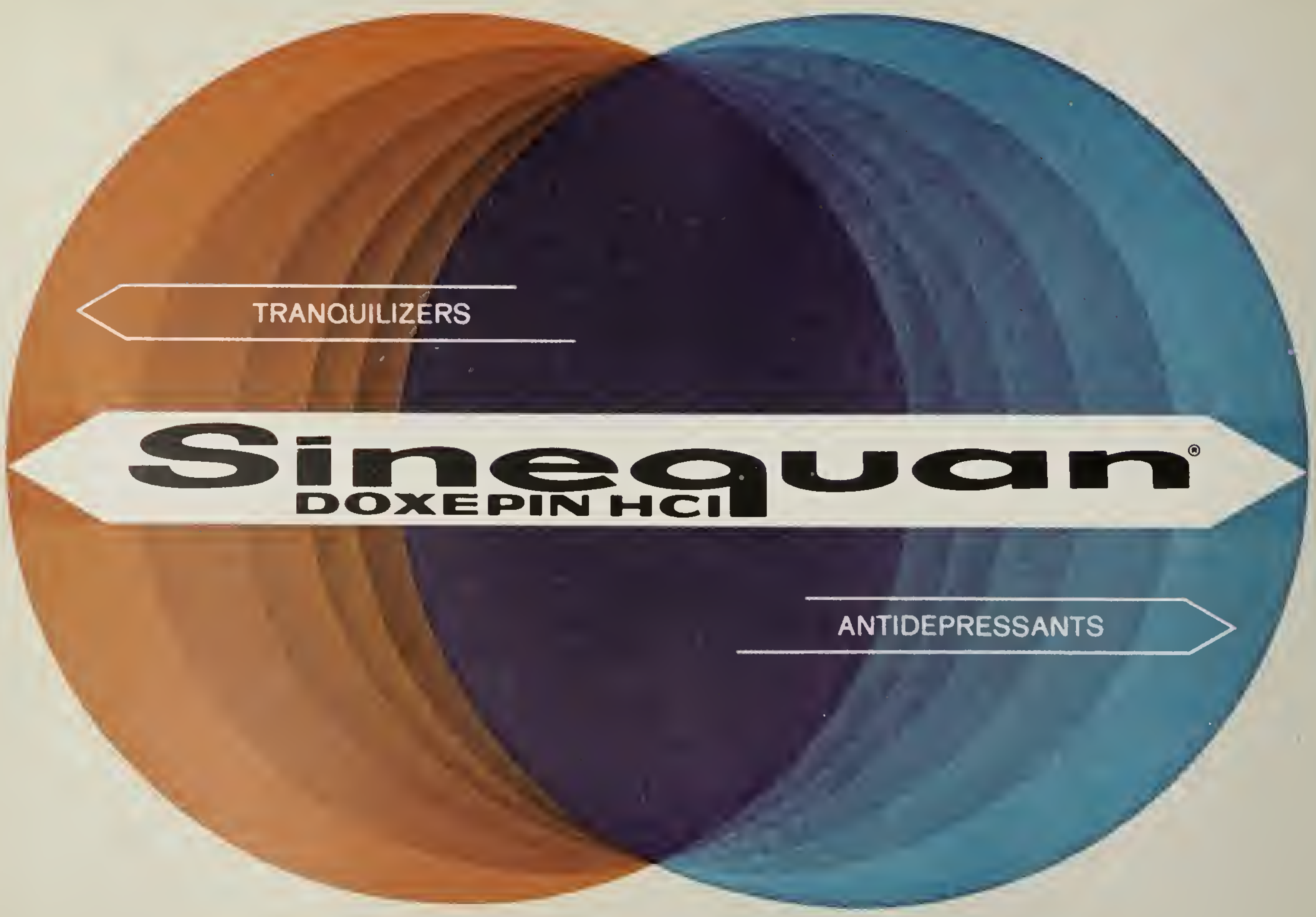

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TARGET SYMPTOMS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT MARKED	MODERATE	SLIGHT	% OF PATIENTS IMPROVED
anxiety/ depression	142	118	39	46	33	83%

In three double-blind studies comparing Sinequan and a fixed combination (perphenazine-amitriptyline), Sinequan was found to be at least as effective as—and in some cases more effective than—the combination.

New Sinequan... in prominent anxiety

238 psychoneurotic patients in whom anxiety was the most prominent symptom were treated with Sinequan—*84% of the patients showed marked, moderate, or slight improvement.*

DIAGNOSIS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT MARKED	MODERATE	SLIGHT	% OF PATIENTS IMPROVED
psychoneurotic anxiety	238	201	92	59	50	84%

In eight double-blind studies of Sinequan and either chlordiazepoxide or diazepam, Sinequan was always found to be at least as effective as—and in some cases more effective than—the tranquilizers in relieving symptoms of anxiety.

New Sinequan... in prominent depression

259 psychoneurotic patients in whom depression was the most prominent symptom were treated with Sinequan—*81% of the patients showed marked, moderate, or slight improvement.*

DIAGNOSIS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT MARKED	MODERATE	SLIGHT	% OF PATIENTS IMPROVED
psychoneurotic depression	259	210	106	72	32	81%

In five double-blind studies of Sinequan and amitriptyline, Sinequan was always found to be at least as effective as—and in some cases more effective than—the antidepressant in relieving symptoms of depression.

Data on File, Medical Research Laboratories, Pfizer Pharmaceuticals, Chas. Pfizer & Co., Groton, Conn.
Summary of clinical experience with Sinequan (doxepin HCl) in, Pitts, N.: The Clinical Evaluation of Doxepin—A New Psychotherapeutic Agent: Psychosomatics 10:164, May-June, 1969.

Adverse reactions:

Sinequan (doxepin HCl) is usually well tolerated, even in the elderly. Those side effects which do occur are generally mild.

Most frequently observed side effects

Drowsiness has been observed, usually early in the course of therapy. It tends to disappear as therapy continues.

Anticholinergic effects (including dry mouth, blurred vision, constipation) have been reported. They are usually mild and often subside with continued therapy or reduction of dose.

Infrequently observed side effects

Extrapyramidal symptoms have been infrequent and have usually occurred at high dose levels. They tend to be mild and easily controlled.

Cardiovascular effects, such as hypotension and tachycardia, have been reported infrequently.

Other infrequently reported side effects include dizziness, nausea, increased sweating, edema, nasal congestion and weight gain.

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Sinequan is contraindicated in individuals who have shown hypersensitivity to the drug, and in patients with glaucoma or a tendency to urinary retention.

Warnings:

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(See last page for full adverse reactions, contraindications, warnings and precautions.)

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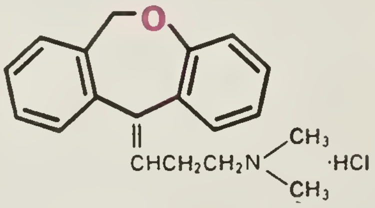

SINEQUAN (doxepin • HCl)

Indications. In a carefully designed series of controlled studies, SINEQUAN (doxepin·HCl) has been shown to have marked antianxiety and significant antidepressant activity. SINEQUAN (doxepin·HCl) is recommended for the treatment of:

1. Patients with psychoneurotic anxiety and/or depressive reactions.
2. Mixed symptoms of anxiety and depression.
3. Alcoholic patients with anxiety and/or depression.
4. Anxiety associated with organic disease.
5. Psychotic depressive disorders including involutional depression and manic depressive reactions.

The target symptoms of psychoneurosis that respond particularly well to SINEQUAN (doxepin·HCl) include anxiety, tension, depression, somatic symptoms and concerns, insomnia, guilt, lack of energy, fear, apprehension and worry.

In those patients in whom anxiety masks the depressive state, SINEQUAN (doxepin·HCl) is of particular value since it exerts a potent antidepressant effect as well as antianxiety activity.

Patients who have failed to respond to other antianxiety or antidepressant drugs may benefit from treatment with SINEQUAN (doxepin·HCl).

Clinical experience has shown that SINEQUAN (doxepin·HCl) is safe and well tolerated even in the elderly patient.

In a large series of patients systematically observed for withdrawal symptoms, none were reported. This is consistent with the virtual absence of euphoria as a side effect and the lack of addiction potential characteristic of this type of chemical compound.

Contraindications. SINEQUAN (doxepin·HCl) is contraindicated in individuals who have shown hypersensitivity to the drug.

SINEQUAN (doxepin·HCl) is contraindicated in patients with glaucoma, or a tendency to urinary retention.

Warnings. *Usage in Pregnancy:* SINEQUAN (doxepin·HCl) has not been studied in the pregnant patient. It should not be used in pregnant women unless, in the judgment of the physician, it is essential for the welfare of the patient, although animal reproductive studies have not resulted in any teratogenic effects.

Usage in Children: The use of SINEQUAN (doxepin·HCl) in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEQUAN (doxepin·HCl). The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Precautions. Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking this drug.

Patients should also be cautioned that their response to alcohol may be potentiated.

Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy.

Although SINEQUAN (doxepin·HCl) has significant tranquilizing activity, the possibility of activation of psychotic symptoms should be kept in mind.

Other structurally related psychotherapeutic agents (e.g. iminodibenzyls and dibenzocycloheptenes) are capable of blocking the effects of guanethidine and similarly acting compounds in both the animal and man. SINEQUAN (doxepin·HCl), however, does not show this effect in animals. At the usual clinical dosage, 75 to 150 mg. per day, SINEQUAN (doxepin·HCl) can be given concomitantly with guanethidine and related compounds without blocking the antihypertensive effect. At doses of 300 mg. per day or above, SINEQUAN (doxepin·HCl) does exert a significant blocking effect. In addition, SINEQUAN (doxepin·HCl) was similar to the other structurally related psychotherapeutic agents as regards its ability to potentiate norepinephrine response in the animal. However, in the human this effect was not seen. This is in agreement with the low incidence of the side effect of tachycardia seen clinically.

Adverse Reactions. Anticholinergic Effects: dry mouth, blurred vision, and constipation have been reported. They are usually mild, and often subside with continued therapy or reduction of dose.

Central Nervous System Effects: drowsiness has been observed. This usually occurs early in the course of treatment, and tends to disappear as therapy is continued.

Cardiovascular Effects: tachycardia and hypotension have been reported infrequently.

Other infrequently reported side effects include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as increased sweating, weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash, and pruritus.

Dosage. For most patients with illness of mild to moderate severity, a starting dose of 25 mg. t.i.d. is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg./day to 150 mg./day.

In more severely ill patients, an initial dose of 50 mg. t.i.d. may be required with subsequent gradual increase to 300 mg./day if necessary. Additional therapeutic effect is rarely to be obtained by exceeding a dose of 300 mg./day.

In patients with very mild symptomatology, or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg./day.

Although optimal antidepressant response may not be evident for two to three weeks, antianxiety activity is rapidly apparent.

Supply. SINEQUAN (doxepin·HCl) is available as capsules containing doxepin HCl equivalent to 10 mg., 25 mg., and 50 mg. of doxepin base in bottles of 100; and 25 mg. and 50 mg. in bottles of 1000.

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Pfizer
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Methacycline *in the treatment of* Cutaneous Infection

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Methacycline is a recently developed antibiotic, 6-methylene-5-hydroxytetracycline. This agent is synthesized from oxytetracycline, and possesses the broad antibiotic spectrum typical of the tetracycline.[1]

In vitro studies have shown methacycline to be more active against many strains of both gram positive and gram negative organisms than either tetracycline or demethylchlortetracycline. Although more toxicity was attached to methacycline than these other two tetracycline agents from animal study data, the contradictory results of studies of the three drugs in man makes these indications of toxicity rather equivocal. Since these studies and others were completed, methacycline has been released for general use.

The purpose of the present report is to present our observations on the use of methacycline in a systemic form in fifty patients with various types of cutaneous infections.

Materials and Methods

The present study concerns our experience with fifty patients selected at random from the out-patient department and dermatology ward of the Skin and Cancer Hospital, Temple University Health Sciences Center. Ages of these subjects ranged from six months to seventy-six years, with an average age of twenty-eight years. The diagnosis of these subjects' infections, admitting them to the present study, comprised the range of primary and secondary infections of the skin. Primary infections included impetigo, furunculosis, cellulitis, ecthyma and folliculitis. Secondary infections included infected stasis ulcer and various secondary pyodermas (used to designate all cases not readily classifiable in any of the other enumerated types, and including such diagnoses as infectious eczematoid dermatitis, impetiginous dermatitis, etc). In addition one patient with histopathologically proven granuloma inguinale and one with hydradenitis suppurativa were included. These infections were severe enough in twenty-three cases to require hospitalization.

A complete history was taken and physical examination done on all patients. Also, the following laboratory studies were performed both before and after administration of methacycline: bacterial smear, culture and colony count with sensitivity studies to methacycline as well as to penicillin, tetracycline, erythromycin, and methicillin; urinalysis; complete blood count; measurements of BUN and SGOT. In cases where methacycline therapy was required for periods longer than seven days, these tests were repeated on the seventh day and again at the termination of antibiotic therapy.

Methacycline was administered to both adults and children at six hour intervals. The thirty-nine adults received one 150 mg. capsule and the eleven children received 6 mg. per pound per day in four divided doses of the syrup at these regular intervals. Each ml. of the syrup preparation contained 15 mg. of methacycline. In forty-eight patients concurrent local therapy was used to facilitate the removal of crusts. In most cases this consisted of washing with soap or Phisohex and water. Eleven patients received benzalkonium chloride compresses, and three others saline compresses. Local antibiotic ointment treatment was given to four patients with infected leg ulcers, five with ecthyma, three with furunculosis, and one with abscess formation.

The criteria for grading clinical responses to methacycline therapy were as follows: *Good*—a definite favorable response was seen with a prompt (within 48 hours) alleviation of symptoms and negative culture or a negligible bacterial count after discontinuation of therapy, *Fair*—a slight response was observed but the symptoms persisted longer than forty-eight hours and a negative culture or significant decrease in the bacterial response was obtained after therapy was discontinued. *Poor*—no alleviation of symptoms or a worsening of the patient's status was observed; the culture remained positive and only a slight decrease, at best, was obtained in bacterial count.

Results

Therapeutic responses in the present study, classified according to the various diagnostic categories, are shown in Table 1. Of the thirty-eight patients with impetigo, ecthyma, and unclassified pyoderma, thirty-three showed good responses to methacycline therapy. The remaining five patients in these diagnostic categories had fair responses to this treatment.

The three cases of infection showing poor responses to methacycline therapy were as follows: One patient with furunculosis had a concurrent hydradenitis suppurativa of three years' duration; from the lesions of this furunculosis a coagulase positive Staphylococcus aureus was isolated that showed resistance to methacycline, tetracycline, penicillin, and streptomycin. One patient had cellulitis that was secondary to a stasis ulcer from which were isolated coliform organisms that were resistant to both methacycline and tetracycline. The third patient with a poor response had an infected stasis ulcer from which was isolated a coagulase positive Staphylococcus aureus sensitive to methacycline but resistant to tetracycline and penicillin *in vitro*.

Table 2 shows the results of susceptibility tests by the disc method performed with cultures from forthy-three of the fifty subjects of this study. A total of sixty-seven organisms were isolated and tested for susceptibility to methacycline, and fifty-eight were found sensitive to this agent.

Two patients experienced slight nausea shortly after the onset of methacycline therapy, but with continued therapy the nausea disappeared. In one patient methacycline was discontinued after sixteen doses because of persistent nausea and dizziness. One patient showed a marked rise of the BUN from 23 to 85 mg. per 100 ml. while receiving methacycline, but this patient was also receiving antimetabolic drugs for mycosis fungoides, and the role of methacycline is difficult to evaluate. One patient showed a significant elevation of the SGOT during therapy from fourteen to forty-nine which returned to normal after treatment. Nine patients had significant elevation of the eosinophil count both before and after therapy, and five others had normal values before therapy with a rise to abnormal at completion of therapy. Since many of these patients were atopic, and many patients with chronic dermatoses exhibit eosinophilia, it is speculative to attempt to evaluate the relationship of these changes to the methacycline therapy. It seems likely that the eosinophilia was more related to the disease than to the treatment. However, other authors have reported transient eosinophilia during methacycline therapy.[2,3] No other meaningful changes occurred in the laboratory studies performed on these patients.

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Summary

Fifty patients with various cutaneous infections were treated with the use of a regime in which the principal therapeutic agent was orally administered methacycline, a new tetracycline analogue. Disc sensitivity testing showed that, of sixty-seven organisms isolated from these infections that were tested against methacycline, fifty-eight were found susceptible. There was a total of thirty-nine good, eight fair, and three poor responses to methacycline treatment among these subjects. Three patients experienced nausea in connection with the test medication; in one case this was severe enough to necessitate discontinuing use of this agent. One patient, who also was receiving an antimetabolic drug, had a rise in BUN value during therapy, and a second patient showed a transient elevation of the SGOT titre. No other evidence of significant toxicity was encountered.

REFERENCES

1. Chang, T. W. and Weinstein, L.: A comparison of the *in vitro* and *in vivo* activity of methacycline and other tetracycline compounds. *Antibiotics and Chemotherapy* 12: 676–688, (December) 1962.

2. Aquilina, J. T. and Coseglia, P. R.: Methacycline, a new antibiotic in the treatment of infections of the respiratory tract. *Current Therapeutic Research* 9: 65–74, (February) 1967.

3. Bumbalo, T. S. and Gabrieli, E. R.: Treatment of respiratory infections in children with methacycline. *Clinical Pediatrics* 6: 74–76, (February) 1967.

Therapeutic responses in the present study, classified according to the various diagnostic categories, are shown in Table 1. Table 2 illustrates the results of susceptibility tests by the disc method performed with cultures from forty-three of the fifty subjects of this study

TABLE 1

DIAGNOSIS AND RESPONSES TO METHACYCLINE

Diagnosis	*No. of Patients*	*Responses* *Good*	*Fair*	*Poor*
Impetigo	8	8	0	0
Furunculosis	3	2	0	1
Cellulitis	3	2	0	1
Ecthyma	5	4	1	0
Folliculitis	1	1	0	0
Hydradenitis Suppurativa	1	0	1	0
Granuloma Inguinale	1	0	1	0
Infected Stasis Ulcer	3	1	1	1
Pyoderma	25	21	4	0
TOTAL	50	39	8	3

TABLE 2

RESULTS OF METHACYCLINE SUSCEPTIBILITY TESTS (DISC METHOD)
CULTURES FROM 43 PATIENTS

	Sensitive	*Resistant*
Streptococcus pyogenes	4	1
Streptococcus hemolyticus	14	—
Streptococcus hemolyticus Group A	5	—
Aerobacter aerogenes	4	—
Proteus vulgaris	2	3
Pseudomonas aeruginosa	2	1
Staphylococcus aureus coagulase—positive	26	3
Staphylococcus albus coagulase—negative	1	—
Escherichia coli	—	1
TOTAL	58	9

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Experience with IUD *First Insertions*

JEAN H. GERENDE, M.S.P.H.
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On March 1, 1965 the Planned Parenthood Center of Pittsburgh began offering the intrauterine device as one of the methods of choice to both old and new patients. The Lippes Loop was used in all instances. A little over two years later, by the end of July 1967, there were 585 women patients at the downtown Center who had selected the IUD. It was then decided to evaluate the experiences of these women as well as some of the individual characteristics of the group. The tables presented here show some of the findings.

Age and Number of Living Children

Comparisons of the per cent distribution by age group and by number of living children of the women who selected the IUD in both the Cooperative Statistical Program[1] and Planned Parenthood Center are indicated in Table 1. Median ages were 26.8 years for the CSP women and 28.5 for the PPC women. In addition, 40 per cent of the CSP women were under twenty-five years of age as contrasted with 24 per cent (less than one fourth) of the 585, PPC patients.

The median number of living children was just about the same, 3.2 for the Cooperative Statistical Program women and 3.3 for those from the Planned Parenthood Center.

Classification of Patients

Table 2 indicates the classification of patients by clinic attendance and IUD status at last contact. It will be noted that from the original group of 585 women only 30 or 5.1 per cent made no second clinic visit after the initial insertion of the device. Of these thirty there were eight women who had the loop inserted in July 1967, the last month of the study, and it is possible they may have returned for their one month follow-up examination.

Duration from date of first insertion to date of last contact was computed for 555 or 94.9 per cent of the total group of 585. Percentage distributions and medians for age as well as the number of living children were quite similar for the 555 and the 585 women (Table 1). Four hundred and twenty-eight (428) or 77.1 per cent of the 555 had the threads visible at time of last clinic examination. One hundred and twenty-seven (127) or 22.9 per cent experienced either a first removal, a first expulsion or an unplanned pregnancy (Table 2).

Termination Rates

Table 3 gives the termination rates (removal, expulsion, unplanned pregnancy and total termination) per 100 initial insertions, specific for age and specific for number of living children.

Removal

Removal rates decrease with advancing age as well as with increased number of living children, from a 20.6 per 100 insertions for women under 25 years to a 9.4 for those thirty-five years and over; and from 17.1 for women with two or less children to 12.3 for those with five or more living children. (Table 3). However, the decrease in the rates between the two age groups, 25–29 and 30–34 is quite small.

Forty-six women representing over half (54 per cent) of the eighty-five who had the device removed did so within six months from date of initial insertion. For the remainder of the group, percentages of removal declined as follows: 7–12 months, 32 per cent; 13–18 months, 8 per cent; and 19 months and over, 6 per cent.

More than one doctor participated in the clinic so that specific causes for removal vary dependent upon the medical judgment of the physician. Nine of the eighty-five women had the device removed for "personal reasons" and the remaining seventy-five women for causes which could be classified as medical. According to W. Parker Mauldin, "there is lack of uniformity among investigators on classifying removals by cause with the exception of the category 'planning pregnancy.'"[2]

Expulsions

Included in the twenty-nine first expulsions were seven women whose devices were removed because of partial expulsion.[3] The median age for this group of twenty-nine was 24 years and median time of expulsion three months. However, 11 of the 29 women expelled the device within one month or less from date of initial insertion and the median age for these 11 was 22 years. Expulsions were confined almost entirely to the first year, 27 of the 29 or 93 per cent.[4]

Eighteen of the twenty-nine (62 per cent) had reported from one to two pregnancies as compared with the eleven (38 per cent) with three to five pregnancies. Although expulsion rates declined with the number of living children, from 7.9 to 2.5, the drop was not nearly as marked as with age from 12.2 to 1.7 (Table 3).

"Expulsions decrease sharply with age and with parity; but based on the United States data reported by Tietze, age rather than parity is the controlling factor . . . Stated another way, younger women have about three times as many expulsions as do older women."[5]

The relationship between age and expulsion is more marked than for removals (Table 3).

Unplanned Pregnancy

Unplanned pregnancy seemed not to be greatly influenced by age of the woman or number of living children. The rate for the 13 women (all ages), 2.3 per 100 first insertions was quite similar to 2.4, that of the Tietze CSP data.[6]

Total Termination

Total termination rates for the Cooperative Statistical women are not as favorable as those for the Planned Parenthood Center women.[7] These may be due to the observed differences in the percentage distributions by age and by number of living children (Table 1). Both sets of data indicate a decrease in the termination rate from all causes combined as age and number of living children increase (Table 3).

The main cause of device loss was removal, then expulsions and unplanned pregnancies were next in that order.[8]

Retention

Of the 555 women studied during the full period, 428 experienced retention of the IUD. Retention rates per 100 initial insertions increased with age as well as with the number of living children, from a 64.9 per cent for women less than 25 years of age to 87.2 per cent for women 35 years and over, and from 71.9 per cent for women who reported two or less living children to a 82.7 per cent for those with five or more children (Table 4).

To compute retention rates in relation to time a modified life table analysis was utilized[9] (Table 5). With this method the assumption is made that the women who retain the IUD leave observation at the middle of the month, which on the average will be true. Interpretation of the table would be as follows: at the beginning of the six to seven month interval 87.9 per cent of the women would still retain the initial IUD;

Table 1

PER CENT DISTRIBUTION BY AGE GROUPS AND BY NUMBER OF LIVING CHILDREN OF WOMEN WHO SELECTED THE IUD

Characteristic	*United States CSP**	*Planned Parenthood Center*	
Age			
Sample Size	23,900	585	555**
Median Age	26.8	28.5	28.6
Per Cent			
Under 25	40	24	24
25–29	28	34	33
30–34	18	22	22
35–39	10	14	15
40+	4	7	6
Living Children			
Median Number	3.2	3.3	3.3
Per Cent			
2 or less	47	41	41
3	20	28	28
4	14	16	16
5	8	7	7
6 or more	11	8	8

* Cooperative Statistical Program for the Evaluation of Intra-uterine Devices under the direction of Dr. Christopher Tietze.

** Cases for whom duration from date of first insertion to date of last medical examination recorded.

Table 2

CLASSIFICATION OF PATIENTS BY CLINIC ATTENDANCE AND IUD STATUS AT LAST CONTACT

Classification	*Number*		*Per Cent**	
Duration from date of first insertion to date of last examination recorded		555		100.0
IUD threads visible at last medical check-up		428		77.1
Attendance main clinic	385		69.4	
Transferred to branch clinic	10		1.8	
Moved out of town	20		3.6	
Transferred to private doctor	13		2.3	
Type of termination		127		22.9
First removal	85		15.4**	
First expulsion	29		5.2	
Unplanned pregnancy	13		2.3	

* Per cent computed on 555 patients with duration from date of first insertion to date of last clinic examination recorded. No second clinic visit was noted for 30 or 5.1 per cent of the total group of 585.

** Per cent adjusted to make subtotal of 22.9.

twelve to thirteen month interval, 76.1 per cent; 18 to 19 month interval, 65.9 per cent and twenty-four to twenty-five month interval, 55.5 per cent. These estimates are conservative since the duration was obtained from last actual clinic observation time.

The above rates are not too dissimilar from those reported by Mauldin from the Tietze CSP study.[10] These cumulative retention rates per 100 IUD users without reinsertions were as follows: six months after first insertion, 82.5; twelve months, 72.9; eighteen months, 65.3 and twenty-four months, 59.8.

"The over-all acceptability of intra-uterine contraception from the objective-medical and subjective-personal points of view, may be measured in terms of a holding rate, i.e., the percentage of women still wearing the device a specified time after insertion, such as one year . . . Under this condition the holding rate [retention rate] may therefore be used as a rough measure of long term effectiveness, as well as acceptability."[11] The estimate of the "holding rate" for the loop for one year was given as 74.9 in Tietze's article, and for the PPC women, 76.1 per cent.[12]

Summary

It is interesting to note the similarity in the findings of the Cooperative Statistical Program and the Planned Parenthood evaluation. Both studies indicated that age and number of living children were the two variables that influenced the rates; removal, expulsion and retention. Unplanned pregnancies did not seem to follow a pattern in relation to age or to number of living children.

The predominant cause of device loss is removal with expulsion and unplanned pregnancy next in order of importance.

To estimate retention time of an IUD a modified life table analysis was used instead of the decay curve as discussed by Mauldin.[13] Although the two methods were different the results were quite comparable, especially for the eighteen-month period: retention rates of 65.3 per cent for the CSP women and 65.9 per cent for the PPC women.

It would be of interest to enlarge the number of women under observation so that retention rates for each age group specific for number of living children could be computed, using the modified life table analysis.

TABLE 3

TERMINATION RATES PER 100 INITIAL IUD INSERTIONS

Specific for Age

Age Group	*Number of Initial Insertions*	*Termination*			*Total Termination**	
		Removal	*Expulsion*	*Unplanned Pregnancy*	*PPC*[1]	*CSP*[2]
Under 25	131	20.6	12.2	2.2	35.0	36.8
25–29	184	15.8	4.9	2.7	23.4	28.4
30–34	123	14.6	1.6	2.4	18.6	22.5
35+	117	9.4	1.7	1.4	12.5	20.0
All ages	555	15.4	5.2	2.3	22.9	27.1
CSP data	—	16.0	8.7	2.4	—	—

Specific for Number of Living Children

Number of Living Children	*Number of Initial Insertions*	*Termination*			*Total Termination**	
		Removal	*Expulsion*	*Unplanned Pregnancy*	*PPC*[1]	*CSP*[2]
2 or less	228	17.1	7.9	3.1	28.1	34.2
3–4	246	14.6	3.6	1.6	19.8	26.8
5 or more	81	12.3	2.5	2.5	17.3	21.7

* Total Termination includes removal, expulsion and unplanned pregnancy.

[1] Planned Parenthood Center.

[2] Cooperative Statistical Program.

TABLE 4

RETENTION RATES PER 100 INITIAL IUD INSERTIONS

Specific for Age			*Specific for Number of Living Children*		
Age Group	*Number of Initial Insertions*	*Retention Rate*	*Number of Living Children*	*Number of Initial Insertions*	*Retention Rate*
Under 25	131	64.9			
25–29	184	76.6	2 or less	228	71.9
30–34	123	81.3	3–4	246	80.1
35+	117	87.2	5 or more	81	82.7

TABLE 5

ESTIMATED PER CENT WITH INITIAL IUD IN PLACE

Months of Use	*Retained*	*Terminated*	*Total*	*Person-Months Exposed*	*Probability of Termination*	*Per Cent Retained*
0–1	2	7	555	554.0	.0126	100.0
1–2	73	26	546	509.5	.0510	98.7
2–3	24	9	447	435.0	.0207	93.7
3–4	16	11	414	406.0	.0271	91.8
4–5	9	4	387	382.5	.0105	89.3
5–6	18	2	374	365.0	.0055	88.4
6–7	27	7	354	340.5	.0206	87.9
7–8	27	8	320	306.5	.0261	86.1
8–9	14	10	285	278.0	.0360	83.9
9–10	14	4	261	254.0	.0157	80.9
10–11	8	3	243	239.0	.0126	79.6
11–12	17	7	232	223.5	.0313	78.6
12–13	34	9	208	191.0	.0471	76.1
13–14	23	3	165	153.5	.0195	72.5
14–15	23	3	139	127.5	.0235	71.1
15–16	14	3	113	106.0	.0283	69.4
16–17	12	1	96	90.0	.0111	67.4
17–18	9	1	83	78.5	.0127	66.7
18–19	5	1	73	70.5	.0142	65.9
19–20	9	2	67	62.5	.0320	65.0
20–21	8	2	56	52.0	.0385	62.9
21–22	5	—	46	43.5	—	60.5
22–23	4	1	41	39.0	.0256	60.5
23–24	5	2	36	33.5	.0597	59.0
24–25	7	1	29	25.5	.0392	55.5
25–26	5	—	21	18.5	—	53.3
26–27	9	—	16	11.5	—	—
27–28	7	—	7	3.5	—	—

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REFERENCES

1. Mauldin, W. Parker et al: *Retention of IUDs: An International Comparison, Studies in Family Planning,* Number 18 (and Supplement), A Publication of the Population Council, April 1967, Table 2 and Table 3, p. 3.

2. *Op. cit.,* p. 7.

3. Tietze, Christopher: *Intra-uterine Contraception: Recommended Procedures for Data Analysis,* Studies in Family Planning, Number 18 (and Supplement), A Publication of the Population Council, April 1967, p. 2.

4. Potter, M. D. et al: Taiwan: *IUD Effectiveness in the Taichung Medical Follow-Up Study,* Studies in Family Planning, Number 18 (and Supplement), A Publication of the Population Council, April 1967, p. 15.

5. Mauldin, W. Parker et al: *Retention of IUDs: An International Comparison, Studies in Family Planning,* Number 18 (and Supplement), A Publication of the Population Council, April 1967, p. 5.

6. *Op. cit.,* Table 6, p. 6.

7. Mauldin, W. Parker et al: *Retention of IUDs: An International Comparison, Studies in Planning,* Number 18 (and Supplement), A Publication of the Population Council, April 1967, Table 6, p. 6.

8. Potter, M. D. et al: Taiwan: *IUD Effectiveness in the Taichung Medical Follow-Up Study,* Studies in Family Planning, Number 18 (and Supplement), A Publication of the Population Council, April 1967, p. 15.

9. Berkson, J. and Gage, R. P.: Calculation of Survival Rates for Cancer, reprinted from Proceedings of the Staff Meetings of the Mayo Clinic 25: 270–286 (May 24) 1950.

10. Mauldin, W. Parker et al: *Retention of IUDs: An International Comparison,* Studies in Family Planning, Number 18 (and Supplement), A Publication of the Population Council, April 1967, Table 4, p. 4.

11. Tietze, Christopher, *Effectiveness and Acceptability of Intrauterine Contraceptive Devices.* Reprinted from the American Journal of Public Health, Vol. 55, No. 12, December 1965, p. 1878.

12. *Op. cit.,* p. 1878.

13. Mauldin, W. Parker et al: *Retention of IUDs: An International Comparison,* Studies in Family Planning, Number 18 (and Supplement), A Publication of the Population Council, April 1967, p. 7.

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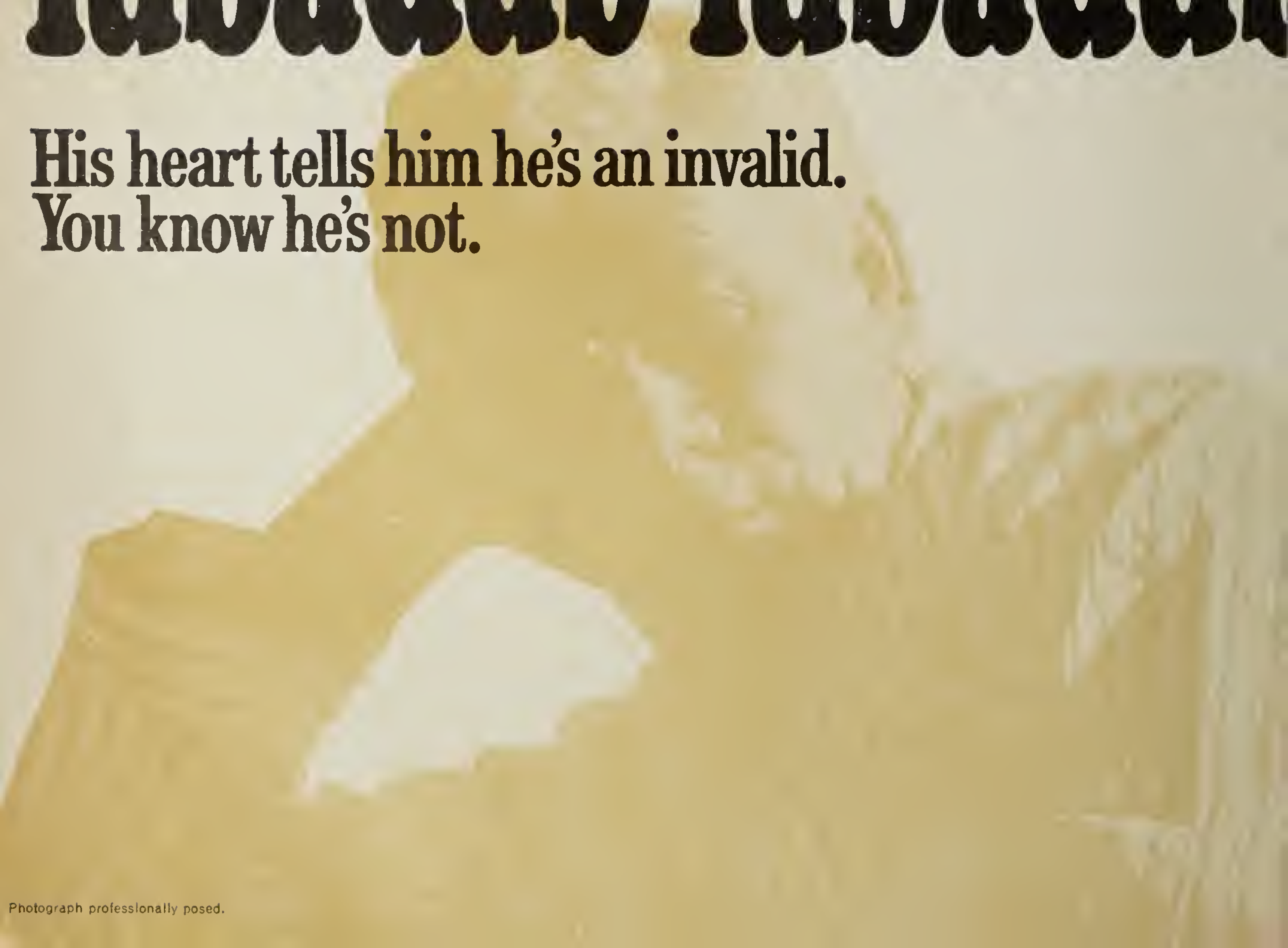

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xiety is expected in the cardiovascular patient.
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t when anxiety is exaggerated . . . when it
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rdiovascular symptoms, your help may
needed.

turally, you'll want to reassure the patient.

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Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

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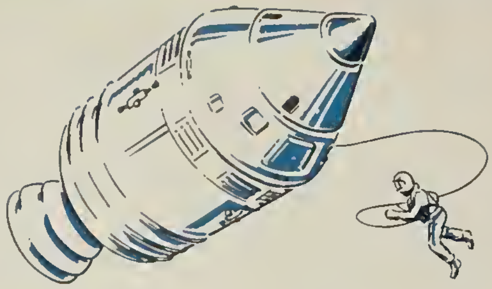

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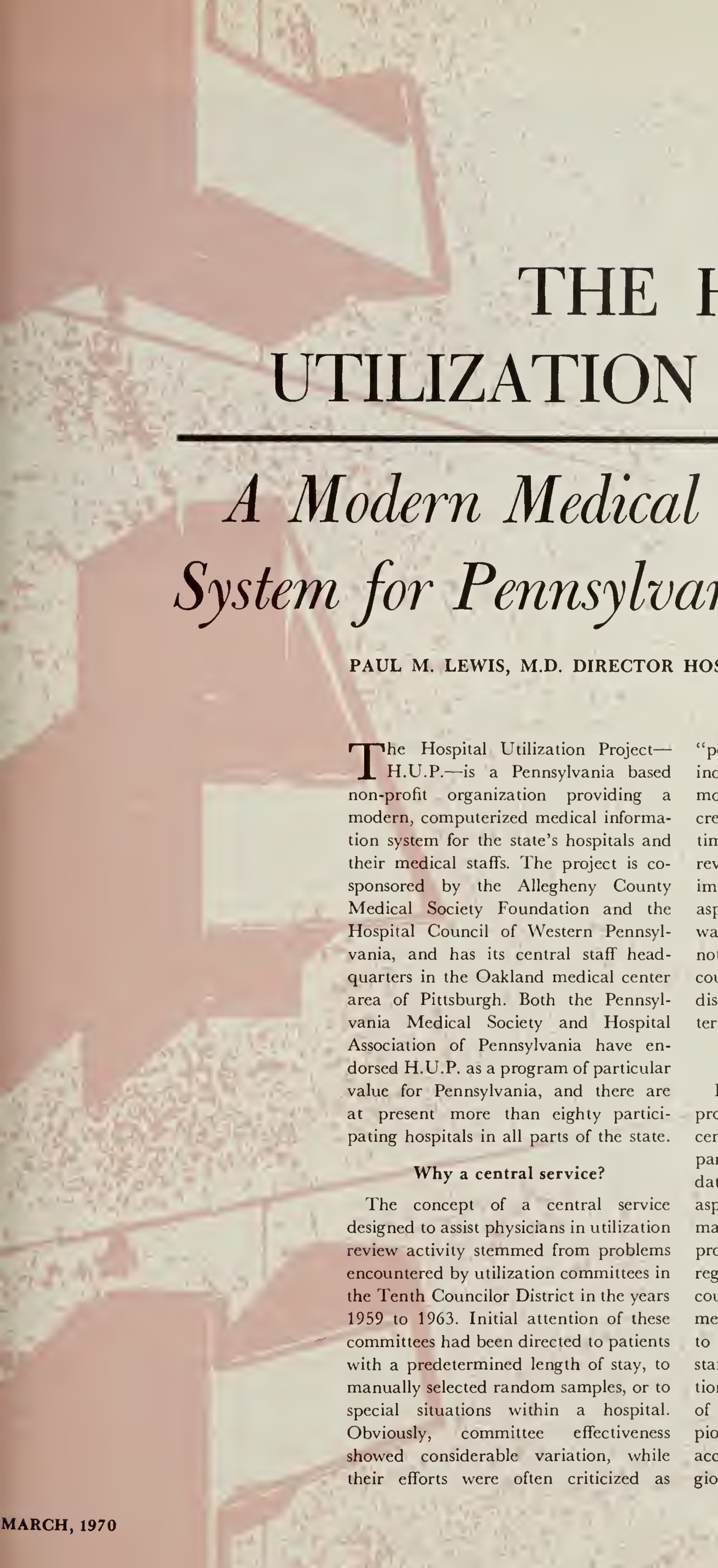


THE HOSPITAL UTILIZATION PROJECT

A Modern Medical Information System for Pennsylvania Hospital

PAUL M. LEWIS, M.D. DIRECTOR HOSPITAL UTILIZATION PROJECT
Pittsburgh

The Hospital Utilization Project—H.U.P.—is a Pennsylvania based non-profit organization providing a modern, computerized medical information system for the state's hospitals and their medical staffs. The project is co-sponsored by the Allegheny County Medical Society Foundation and the Hospital Council of Western Pennsylvania, and has its central staff headquarters in the Oakland medical center area of Pittsburgh. Both the Pennsylvania Medical Society and Hospital Association of Pennsylvania have endorsed H.U.P. as a program of particular value for Pennsylvania, and there are at present more than eighty participating hospitals in all parts of the state.

Why a central service?

The concept of a central service designed to assist physicians in utilization review activity stemmed from problems encountered by utilization committees in the Tenth Councilor District in the years 1959 to 1963. Initial attention of these committees had been directed to patients with a predetermined length of stay, to manually selected random samples, or to special situations within a hospital. Obviously, committee effectiveness showed considerable variation, while their efforts were often criticized as "police" action, designed to ferret out individual cases of "abuse." Furthermore, busy practicing physicians increasingly complained of much valuable time spent on essentially unproductive review. It was apparent that it was impossible to review all cases or all aspects of medical care; some method was required to screen out cases that did not need review, so that committee time could be spent more productively in discussing utilization practices and matters involving medical judgment.[1]

How was H.U.P. designed?

In seeking a solution to some of these problems, H.U.P. was envisaged as a central resource that could provide participating hospitals with technical data and personal staff assistance in all aspects of utilization review activity. To make this assistance most effective, the project was deliberately designed as a regional program for Pennsylvania; it could thus not merely offer statistical medical data by mail, but would be able to provide a broad range of in-hospital staff assistance in collection of information, interpretation of data and analysis of problems revealed. This unique and pioneering concept has received wide acceptance, with numerous similar regional services now being established in various areas of the country. The most recent endorsement of this approach was made in a paper by the director of the Professional Activity Study (P.A.S.) of Ann Arbor, Mich., in which he commented on the value of personal staff assistance from people in the area, and recommended that the "Pennsylvania" example be followed.[2]

To implement this objective of personal service, H.U.P. policies are established by a board of directors widely representative of voluntary medicine; membership includes county society officers, hospital administrators, practicing physicians, and other representatives of the health community and the public. Medical, Administrator's, and Research Advisory Committees provide guidance to the staff of the project, and it is chiefly recommendations and suggestions of these committees that lead to program revisions and new or improved services.

H.U.P. staff has been organized to provide the direct personal assistance that is possible when a program is limited to a regional grouping of hospitals. The executive director, who must be a physician, is supported by an associate director with a degree in hospital administration, a director of research, two full-time medical record librarians, an administrative assistant for extended care facility (E.C.F.) activities, and a small statistical staff. All of these people work directly, intimately and frequently with medical staffs and administration of participating hospitals. These activities include attendance at meetings, instruction and training in collection of medical information, help with interpretation of data, and assistance in conducting special studies within the hospital.

What does it provide?

To provide meaningful computerized statistical and comparative data on hospital use, H.U.P. designed a "pattern" review technique; information is collected on all discharged patients, specific major diagnostic categories are analyzed, and data reported to show comparative experiences. The process is essentially a screening mechanism, designed to indicate patterns of care and to direct attention to practices which might be modified for groups of cases.

H.U.P. collection of data starts in the hospital record department with the completion of an abstract of the record of every discharged patient. The present abstract was designed to be as simple as possible consistent with utilization review needs, and with confidentiality assured through coded identification of patient, physician and hospital. The completed abstracts are sent to the H.U.P. data-processing center in monthly batches, where a strict coding verification and quality control review precedes computer input.

Conference *with Utilization Committee Chairman—John H. Sheehan, M.D. (left), utilization committee chairman, Pittsburgh Hospital, and Paul M. Lewis, M.D., H.U.P. executive director.*

From the information contained on this single input document, H.U.P. is able to supply each hospital with a variety of computerized listings and indexes required for internal operation and for J.C.A.H. accreditation. The orderly listing of patients by diagnosis and operative procedure permits efficient retrieval of answers to specific questions. From data contained in the semi-annual disease and operation indexes, H.U.P. prepares comparative length-of-stay reports for some twenty major diagnoses most commonly responsible for hospital admission, and sets of simple bargraph profiles for each hospital, illustrating its length-of-stay position for each diagnosis relative to similar hospitals in the state.

A focus is thus presented on length-of-stay experiences differing from that of comparable hospitals—not to indicate these differences are wrong, but to stimulate the asking of "why?". To answer this question, U.R. committees do in-depth reviews of individual cases in the deviant category, using detailed worksheets, and guided, where necessary, by the H.U.P. "Criteria" manual, which lists norms of accepted care for more than seventy diseases and operations. Committee evaluation of these individual case review findings then permits identification of valid medical reasons for variance and highlights extra-medical factors that might require attention. The approach is educational throughout, with no attempt to be either disciplinary or punitive. Furthermore, the detailed analysis of individual cases, guided by accepted criteria, provides an in-depth medical care appraisal by which to document the level of excellence within the hospital. Such appraisals offer factual information for staff discussions, clinical conferences, resident training, and other in-hospital continuing education programs.

What else is H.U.P. doing?

Experience gained over the years has led to H.U.P. involvement in areas other than hospital review.[3] Supported by a grant from the Health, Research and Services Foundation of Allegheny County, research has been conducted in utilization review for rehabilitation centers, psychiatric facilities and institutions for the mentally retarded. For the past two years a Public Health Service

Reviewing H.U.P. Statistical Reports—*Edward H. Noroian, right, executive director, Presbyterian-University Hospital, Pittsburgh; H.U.P. Executive Director Paul M. Lewis, M.D., center, and Research Director Donald N. Doyle, left.*

Checking *the monthly discharge analysis—Miss Bertha Petrak, R.R.L., seated, medical record librarian, The Western Pennsylvania Hospital, and Miss Judith Weilerstein, R.R.L., H.U.P. medical record consultant.*

contract has funded an extensive study of utilization review in Extended Care Facilities. H.U.P. has designed an E.C.F. medical abstract for reporting of information on both patient care and utilization committee activities. Copies of abstracts for all Medicare patients reviewed in both a Medical Society—Blue Cross Central Review Plan and from facilities using a variety of other approved review methods are submitted to H.U.P. for analysis. More than forty-five E.C.F.'s are included, representing over 3,000 beds.

H.U.P. provides staff assistance to the fifteen facilities not using the Central Review Plan; instruction and training in medical data retrieval are supplied by a full-time nurse field supervisor experienced in the nursing home field, and consultation is provided by H.U.P. record librarians and other staff members.

From the submitted abstracts, the Research Department of H.U.P. develops statistical and comparative data on patient populations and E.C.F. usage. These are incorporated in monthly and semi-annual reports to all participating facilities and, as with hospitals, staff assistance is provided in interpretation and analysis of findings.

In July, 1969, as a further step toward becoming a comprehensive health information center, H.U.P. began a study of methods of evaluation of patient care in Home Health Agencies. It is hoped this will eventually provide physicians and health agencies with an identifiable and integrated continuum of information on patients and their health care needs.

Reprogramming

Constant changes and increasing complexity of requirements for accurate data on hospital usage have accompanied the expanding role of third-party payers and government agencies. To meet these needs, H.U.P. has undertaken an extensive reprogramming, which became operational in 1969. Based on recommendations of participating hospitals and advisory committees, the new program includes additional reporting of medical care data for use by medical audit and medical care appraisal committees, and increased administrative information for hospital planning, internal management, etc. There are also an expanded number and variety of reports on special hospital situations which are available on request without charge, and can be tailored to the individual hospital's information requirements.

Utilization Review, the H.U.P. Way

The Hospital Utilization Project is designed to ease the work-load of busy physicians by providing computerized medical data essential for utilization review and medical care appraisal. Specifically it offers to each medical staff:[4]

1. An established, tested program, sponsored and endorsed by Pennsylvania medicine.
2. Experience in Pennsylvania utilization review problems and their solutions.
3. Personal staff assistance tailored to individual committee needs.
4. Progressive screening of all discharges, with a focus presented on areas worthy of committee attention.
5. Selective medical audit reporting according to individual staff requirements.
6. Comparative data both on hospital use and patient care.
7. Detailed reports and analyses of individual hospital problems.
8. A simplified, individualized, meaningful program for utilization review and medical care appraisal.

REFERENCES

1. Shindell, S.: "Hospital Utilization—Review Mechanisms," *J A.M.A.*, Vol. 196, No. 2, April, 1966.

2. Slee, Vergil N.: The Professional Activity Study and the Medical Audit Program, A.H.A. 70th Annual Meeting, Atlantic City, New Jersey, 17 September, 1968.

3. Lewis, P. M.: "The Hospital Utilization Project of Pennsylvania," *Public Health Reports*, Vol. 83, No. 9, September, 1968.

4. The Hospital Utilization Project: Utilization Review, the H.U.P. Way; revised, Pittsburgh, Blue Cross of Western Pennsylvania, 1968.

The Health Insurance Review Committee
of the Philadelphia County Medical Society

J. EUGENE RUBEN, M.D.
Committee Chairman
Philadelphia

What is such a committee? What does it do, and how does it do it? This report will answer these questions. Hopefully it will help others to do this work.

Third party payment of medical and hospital charges is here to stay, and will assume an increasingly important place in the economics of the health industry. The Health Insurance Review Committee of the Philadelphia County Medical Society was born of the concept that the preservation of the health insurance industry in a financially viable condition is essential to the preservation of the private practice of medicine on a fee-for-service basis. In 1961 when this county medical society established its first review mechanism, a few physicians thought that a major medical insurance plan was an invitation to make a normal fee of $250 into a $1250 fee. This pointed out the need to keep the price of major medical insurance premiums within that number of dollars which an employer or union might reasonably be expected to pay as a fringe benefit. As with all insurance, the cost of the premium directly reflects the monies paid for medical fees and hospitalization costs. There was also a need for a mechanism through which a patient or a physician might protest decisions of third party payers. No forum then existed at which organized medicine and the health insurance industry could meet to discuss their mutual problems.

Major medical insurance was not the biggest problem in the area of third party payments. The Philadelphia Blue Cross contract to pay hospital bills is a limited contract. Blue Cross had been unilaterally, and with increasing limitations, interpreting its own contract to decide which hospital bills fell within the contract. By 1958, Blue Cross employed a panel of physicians to decide the more difficult questions, but the physician who ordered the hospitalization was not permitted to appear before this panel. Great frustration was generated among the physicians of this area. By 1965 this had reached such proportions that Philadelphia Blue Cross requested the Philadelphia County Medical Society to establish a new and final review mechanism entirely under the auspices of the Medical Society. Blue Cross agreed to accept the recommendations of this Review Committee as final in those cases under dispute in which the attending physician requested a final review by this County Medical Society Committee.

The Health Insurance Review Committee was organized from existing committees. It first met in February 1966 to consider major medical insurance fee questions and Blue Cross hospital bill payment questions. In the fall of 1966 Medicare fee questions began to appear, and in January 1967 Prevailing Fee Plan problems of the Pennsylvania Blue Shield were added. Some negligence and compensation insurance matters were also considered. Recently Champus (Civilian Health and Medical Program of the Uniformed Services) has been added. If services are ever paid on a prevailing fee basis, medicaid will also have to be managed.

Method

Meetings are held as often as the case load requires. Ten to twelve cases are put on the agenda for each meeting. Each case record is mailed to one of the generalists or specialists who make up the regular membership of the Committee two weeks or more before the scheduled meeting. Each case is assigned to a member who is knowledgeable in that field. He reviews and summarizes the case prior to the meeting, and presents his summary and recommendation for solution of the problem to the committee. Following the necessary discussion, a decision is voted by the committee. Occasionally a decision cannot be reached; the case is then reconsidered at a later meeting. We have averaged 11 final decisions per meeting. (Table 1.)

Since Philadelphia is a medical center, we occasionally have to decide a case so unusual in its treatment that no member of the committee really understands what was done. Each specialty society in the area has furnished the committee chairman with a list of several of its members who are willing to serve as consultants to the committee. When consultation is needed, one of these specialists processes the case as a regular committee member would, and attends the committee meeting for discussion of the case.

Representatives of the health insurance industry are non-voting members of the committee but participate in the discussions and are very helpful in solving some of the problems presented. They have educated the doctors on the committee in the functions and problems of their industry. The doctors have educated them in medical aspects. The free and open discussions have brought about much better understanding and cooperation between the two groups.

Fee question cases (Table 2) come from major medical, compensation and negligence insurance plans, as well as from the Blue Shield Prevailing Fee Plan, Medicare, Medicaid, and Champus. The committee never determines a physician's fee; it does determine the basis for the carrier's liability based upon a determination of the usual and customary charge in this community for the service rendered. The committee member assigned to the case talks with the physician who cared for the patient; he asks about complications, unusual expenditure of time, unusual difficulty in clinical care, accommodations in the hospital, and special consideration demanded by the patient or his family. These factors along with the patient's income, are then presented to two physicians in the same field of practice as the attending physician, and preferably of about the same age and stature in the profession. Each of these doctors is simply asked, after having been given the information on the patient, "What would your charge be?" Names are never used—neither the patient's nor his physician's. The figures given by these two physicians are used with that of the committee member who is working on the case to arrive at a recommended fee for committee consideration. After hearing all this data, the committee decides on a dollar amount as the basis for the carrier's liability in that case.

We avoid judging any case on the basis of a previous similar case. We have not tabulated our recommendations in common surgical procedures in order to avoid developing a fee schedule, or even "guidelines" for the committee's own use. Every attempt is made to judge each case individually on its own merits.

Questions of "medical necessity" have come up in Medicare cases. The fiscal intermediary may ask whether we think it was necessary to take an electrocardiogram four times a week for three months on a patient coming to the doctor's office for the tracings. Attempts to answer adequately this and similar questions have failed. We decided that a fair answer requires an investigation in greater depth than a voluntary committee is equipped to make.

We avoid "medical audit." We do not allow our ideas and criticisms of diagnosis and treatment to influence any decision. This is not always easy!

The carrier, physician or patient may request review of a fee question. Blue Cross cases are reviewed only when the attending physician requests this in writing. All Blue Cross cases have been rejected for payment before such a request can be made. The committee decides whether total, partial, or no payment should be made by Blue Cross, and Blue Cross accepts this recommendation as final. There have been no legal actions as a result of our recommendations to Blue Cross, but if there should be, Blue Cross has agreed to accept all responsibility for any costs of defense and/or judgement against a doctor on the committee.

Blue Cross cases have been the most numerous and have occupied the most time (Table 3). The decision as to whether Blue Cross should be asked to pay all or part of the hospital bill is based upon these considerations:

1. Did the medical condition of the patient require hospitalization? Admission for studies which could be done on an out-patient basis would not usually be considered necessary but admission of a patient with chest pain who was to have a Master two-step test would be.

2. Could out-patient facilities have been used? A minor surgical procedure under local anesthesia might raise this question.

3. Was consultation wisely and promptly initiated?

4. Were required diagnostic and treatment procedures initiated promptly?

5. Was the entire length of the hospital stay medically necessary? If the patient stayed an extra day until someone could conveniently take him home, this day would not be considered a Blue Cross liability. If the delay in discharge was caused by inadequate hospital staffing (lab work not done promptly, or something similar), the extra days would be recommended for payment by Blue Cross. Hospital administration would be advised of the committee's criticism.

The physician who requested the committee to review a Blue Cross case is invited three weeks in advance to attend the meeting at which his case will be reviewed. His appearance is not mandatory, but it is often helpful in answering some of the questions which lead to the decision. Except for a partner physician, no person such as attorney, patient, relative or friend of the patient may attend; none of these could furnish meaningful information.

TABLE 1

ALL CASES REVIEWED—BY YEARS

Year	*No. of Meetings*	*No. of Cases*
1966	27	262
1967	17	163
1968	18	184
1969	12	130
Totals	74	739

TABLE 2

FEE CASES FROM ALL SOURCES—165 CASES

Year	*Fee Sustained*	*Fee Reduced*
1966	13	28
1967	11	14
1968	16	54
1969	9	20
Totals	49	116

TABLE 3

PHILADELPHIA BLUE CROSS CASES REVIEWED—711 CASES

Year	*Sustain*	*Modify**	*Reverse*
1966	130	28	63
1967	71	15	52
1968	69	19	42
1969	130	31	61
Totals	400	93	218

* The committee has the prerogative of deciding that while the hospital admission was a Blue Cross obligation, the patient was kept in the hospital longer than was medically necessary. It then suggests that Blue Cross pay some, but not all, of the hospital days for that patient. Thus, the Blue Cross decision to pay none of the bill is "modified." but not "reversed."

Results

The three tables accompanying this paper summarize the work of the committee in its first four years. In 70 per cent of the cases involving a fee question the Committee has judged the carrier's basis of responsibility to be less than the physician's charge. In 43.7 per cent of Blue Cross cases, the committee has asked Blue Cross to pay all or part of the previously rejected hospital bill.

One of the early and continuing objectives of the Committee was education. As hoped, the number of cases to be reviewed has decreased after the first year (Table 1). Physicians have learned what to expect, and the health insurance people have learned how organized medicine views certain recurring problems. Questions involving fees have had the most rapid educational resolution. Table 2 does not show a decrease in the number of fee cases each year, but this is because we have been working on more plans each year—i.e. Blue Shield's Prevailing Fee, Medicare, and Champus have all been added. Philadelphia is a metropolitan area with a minimum of major medical fee problems from the beginning of our work. Even this minimum has dropped to almost nothing. Physicians have apparently learned that a regular charge, whether billed to an individual or a third party is acceptable, whereas an unusually high charge will be questioned.

The number of Blue Cross cases has diminished as certain clinical factors have been clarified (Table 3). For example, a patient suffering acute abdominal pain is admitted to the hospital for acute appendicitis. After admission, the signs and symptoms begin to subside, surgery is deferred, and after a suitable period of observation, is considered unnecessary; the patient is then sent home. In the early part of our work, the hospital bills of such patients were often rejected for payment by Blue Cross, and the rejection was appealed to the committee. Blue Cross soon realized that good clinical care and judgement should not be penalized in this way. This type of case is no longer rejected for payment by Blue Cross, hence no longer comes before the committee.

Summary and Conclusions

This paper summarizes why a Health Insurance Review Committee was needed, when and how it was organized, how it functions, and details some of the results of its efforts.

The committee provides an avenue for communication between the third parties who pay the bills, the physician and hospitals who furnish the services, and the patients who receive them. This has helped to reduce misunderstandings between these three groups. The committee has brought the knowledge which only a group of practicing physicians can have to the resolution of the problems brought to the committee.

Since some person or group of people must resolve third party payment questions, it is better and fairer to all concerned that this be done by practicing physicians who are abreast of the daily work from which the problems arise. The final decisions of the Health Insurance Review Committee of the Philadelphia County Medical Society are made by such a group.

PENNSYLVANIA MEDICAL SOCIETY
ANNUAL SESSION

HOST FARM MOTEL, LANCASTER
OCTOBER 4-8, 1970

Medicine and Religion

A Natural Alliance

L. M. HOFFMAN, M. D.
Chairman, Committee on
Medicine and Religion
Lycoming County Medical Society
Williamsport

We as human beings have been long denying our basic nature. As "enlightened" men we have had the tendency, as never before, to compartmentalize our lives. Nowhere is this more apparent than in the attitudes regarding science, medicine in particular, and its relationship with religion.

It has been the tendency to feel that one has little to do with the other. I might go so far as to say that between the two there has been a lingering distrust and yet somehow both have survived, both fulfilling very basic human needs. Basic, but somehow thought of as separate. In life, it is often the case that things, given sufficient time, come full circle. And so it is with science and religion. Over the years the two have drawn so far apart that it was popular to think of them as unrelated. But recent developments have proven that it is not sufficient to serve only the physical or only the spiritual. In fact, it is impossible to do so.

The technology which we have so long idolized has thrust upon us an increasing number of decisions involving basic morality. What more basic inquiries than: What is life? What is death? When does it begin? When does it cease to be?

A man whose brain is damaged beyond repair is kept alive by artificial means which must eventually fail. Do we just pull the plug?

A dying woman in severe pain whose life can be extended several weeks. Should she be allowed to refuse treatment? Has she the right to die?

The violent drunk. Is he sick or is he responsible before society?

Abortion, right or wrong?

These are some of the myriad questions which must be answered. Science and religion can no longer look in the other direction as they pass each other. There is a bond in the people they seek to serve. And even more complex problems of an even more complex age are facing us. The time to begin preparing for them is now. The perfect training ground is in the solution of today's problem.

The question has often been raised as to what areas medicine works in partnership with religion. It is obvious that common goals are shared by clergy and physicians, for both are deeply concerned with the well-being of man. But it is not always so obvious where and when cooperation is required. This was but one of the problems faced by the Lycoming County Medical Society's Committee on Medicine and Religion in the fall of 1964.

It was at this time that the committee began to formulate plans for a program designed to encourage a better awareness of common goals and to develop attitudes to facilitate these goals. It was not altogether encouraging to note that this had been tried elsewhere with less than a complete success.

Nevertheless, a program was developed and following discussions with Lycoming County clergy and the Family Counseling Service a meeting was planned for March of the following year. This was to be an exploratory meeting, one in which we would get acquainted both formally and informally.

On March 12, 1965 the first meeting was held at Williamsport Hospital. Perhaps it was a good omen that we first met in Fellowship Hall. Following dinner, the program began with the showing of the AMA film "The One Who Heals." Those gathered were then given a short history lesson. The history of medicine was traced from the days of the physician-priest through Hippocrates to present day. The meeting was then thrown open to general discussion. Representatives of the three major faiths were on hand and were joined by a number of physicians as well as several of the general public. Areas of common interest were discussed and through this the direction of our program was given its initial impetus.

The next meeting was held May 19, 1965 and featured a panel discussion of physicians and clergy on the topic "Care of the Critically Ill and Dying." At this point the committee decided to continue these programs on a twice a year basis for an indefinite time.

Additional meetings were held with panel discussions on the topics of "Psychiatry," "Retarded Children," "Alcohol and its Relation to Health, Morals and Violence," "Unwed Mothers" and "Pornography." Following formal presentations, the meetings were thrown open to general discussion. Since they were attended by the general public as well as physicians and clergy, the discussions were lively, informative and almost always constructive.

The panels were composed of such diverse people as rabbis, priests and ministers, as well as obstetricians, state policemen and psychiatrists, not to mention a state legislator, a Liquor Control Board representative and a member of Alcoholics Anonymous.

While we were pleasantly surprised with the response, it was decided that a basic change be made in the format. Up to this point the meetings had been publicized and the general public was invited. We felt that we had covered many social problems where physicians and clergy share common interests. It was decided that future meetings would concentrate on the field of personal problems having moral and medical considerations and particularly the important area of counseling where physicians and clergymen so often share responsibility.

On May 22, 1968, a psychiatrist, A. M. Hostetter, M.D., of Harrisburg, conducted a lecture presentation entitled "Anatomy of the Personality and Its Relation to the Counselor and Counselee." We were extremely fortunate to have had Dr. Hostetter as lecturer at all subsequent meetings.

At the meeting in the fall of 1968 he was joined by Dr. Clifford Smith, Professor of Psychology, Lycoming College, and Herman Brickhouse, M.D., Williamsport psychiatrist. The topic was "Depression with Special References to Suicide."

A three-part program in the spring of 1969 discussed:

a. How to Recognize Serious Mental Illness,
b. Behavior of Militant College Students and Drug Users,
c. Differences Between Functional Mental Illness in the Elderly and the Changes Due to the Aging Process.

The most recent meeting began with the showing of the AMA film "A Storm, A Strife," after which there was a discussion of topic "Communication between Clergy and Physicians with Special References to the Treatment and Consideration of Unreasonable Guilt." Particular reference was made to the patient's concept of sin and the obsessive factor which can sometimes be created.

At this point it seems that the program so far has been quite successful. Attendance at our meetings varied, or course, but we averaged fourteen physicians and thirty-two clergymen. In addition the meetings opened to the public attracted ten to twelve additional interested persons, many with valuable observations.

The foremost benefits of these meetings were educational. Many physicians were surprised to learn of the wide range of problems which the clergy were called upon to handle, many of which had clear medical implications. In turn, it was clear to many clergymen that physicians routinely became involved in the personal problems of their patients, many of these problems touching on issues of morality. The increasing awareness of these facts created a spirit of cooperation which facilitated an exchange of ideas. The discussion period of each meeting often prompted a free-wheeling discussion of practicality and philosophy.

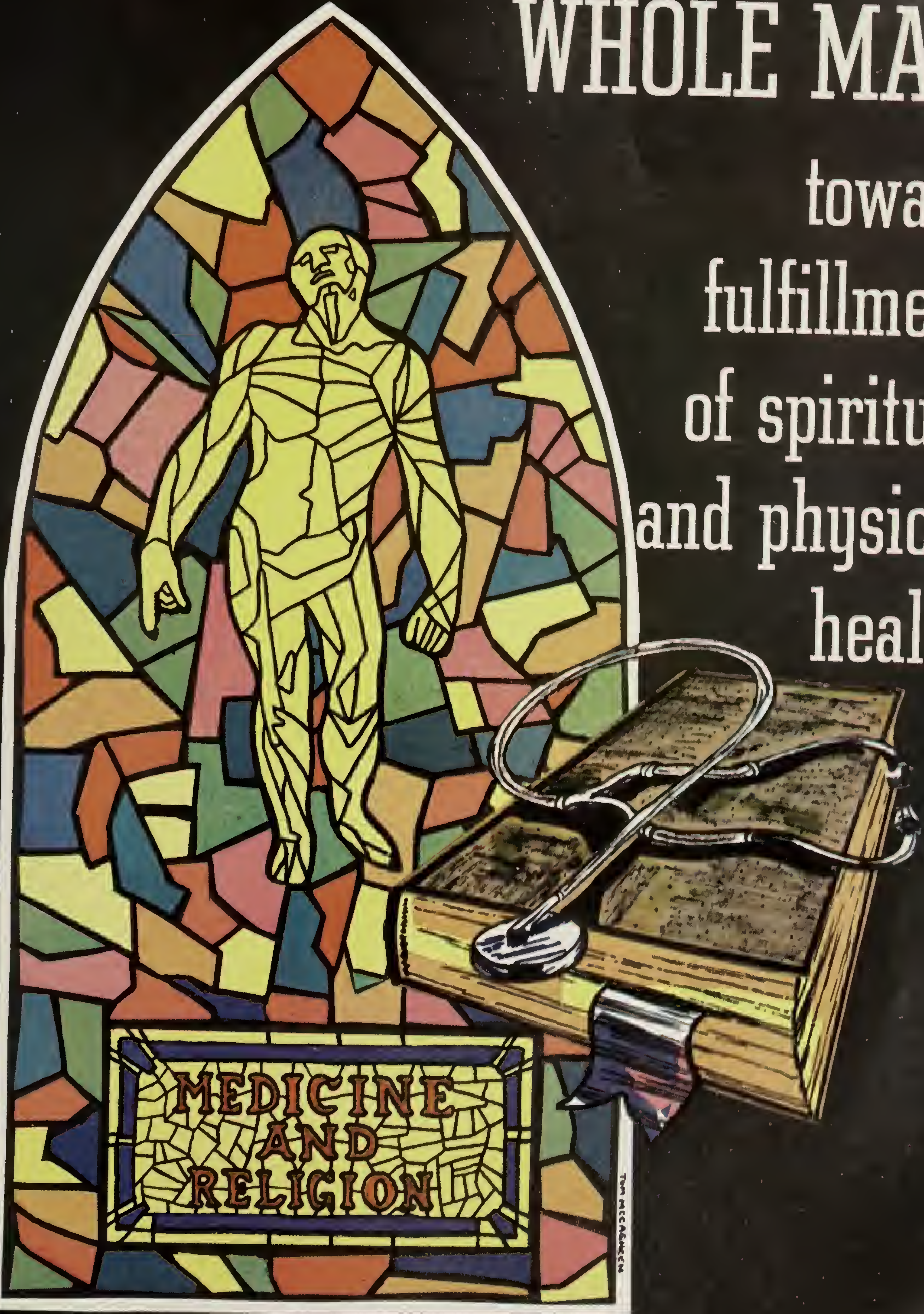
An important side effect of these meetings was reported by members of the clergy. Many reported that this was a rare opportunity for rabbis, ministers and priests to compare notes on mutual problems. The resultant ecumenical spirit was an unanticipated but most welcome by-product.

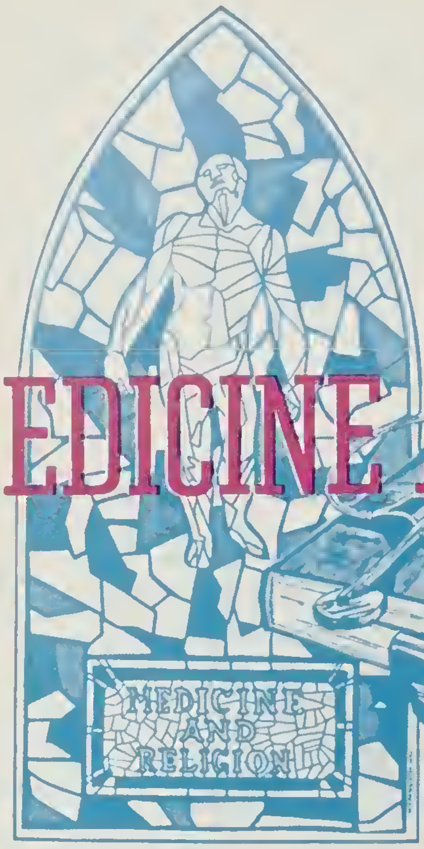
In evaluating the program at this point, we are proud to refer to it as a qualified success. Qualified because it is difficult, if not impossible, to measure the real impact of any such program. It is interesting to note that after five years, enthusiasm still continues quite high.

We know that many physicians and clergymen were given a real opportunity to understand the problems each face. A greater appreciation was gained of the abilities each must possess to deal with these problems. And here in Lycoming County a beginning has been made, a forum established, to continue to transmit very helpful insights into the whole man as seen by the two persons to whom are most intimately revealed the two components of his nature, body and spirit.

Treatment of the WHOLE MAN

toward fulfillment of spiritual and physical health





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March, 1970

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This is "Medicine and Religion Month" in Pennsylvania—part of an approach to a space age problem that has proliferated as a by-product of today's medical advances.

Physical, spiritual, emotional and social factors influence the health of man. Any objective assessment of contemporary man by the most scientific observer does reveal that man is a religious being. The explanations for this observation are varied and controversial, but if the physician is to pursue his discipline with integrity and has patient care as his object of major concern, he must admit this fact.

Both physicians and clergymen find themselves consulting with patients. From their collective judgment will come the most effective care and treatment of the patient as a whole man.

During Pennsylvania's "Medicine and Religion Month"—and all year long—remind your patients with this attractive poster that faith, too, is a physician.

The Editors

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Non-nursing mothers may begin Ovulen-21 immediately after delivery, on the day of departure from the hospital or at the first postpartum visit, as desired. It is recommended that nursing mothers begin Ovulen-21 four weeks after delivery.

A small fraction of the hormonal agents in oral contraceptive pills has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Actions—Ovulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen depresses the output of both the follicle-stimulating hormone (FSH) and the lutenizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis and pulmonary embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates in the United States found relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable. Retrospective studies in Great Britain have shown a statistically significant association between cerebral thrombosis and embolism and the use of oral contraceptives. This has not been confirmed in the United States.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions, medication should be withdrawn.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen. Therefore, if such tests are abnormal in a patient taking Ovulen, it is recommended that they be repeated after the drug has been withdrawn for 2 months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted. anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: Increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

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1. Royal College of General Practitioners: Oral Contraception and Thromboembolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967.
2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968.
3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969.
4. American Journal of Epidemiology (to be published).

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A list of educational opportunities offered to physicians in the interest of maintaining their competence and skill. Unless otherwise indicated, all courses are designed for physicians engaged in primary patient care.

ANESTHESIOLOGY

May 14-16, 1970; Pittsburgh

C—**Fourth Annual Symposium on Acute Medicine**; at Pitt; 24 hrs. AAGP credit applied for; $100 fee. Contact Bulent Kirimli, M.D., Director, 1188 Scaife Hall, Pittsburgh 15213.

CARDIOVASCULAR DISEASE

March 18 1970; Reading

I/AMA—**The Management of the Hypertensive Patient Undergoing General Surgery** (Continuing Education Program—3rd Wed., 8 months); by Hahnemann at Community General Hosp. Contact Paul K. Stolz, M.D., Dir., Con-Continuing Educa., Community Hosp., 135 N. 6th St., Reading 19601.

March 19, 1970; Williamsport Hospital

I/AMA—**Coronary Artery Disease; Pre-Infarction and Post-Infarction. Problems of Recognition and Management** (Postgraduate Seminars held 3rd Thurs. ea. mo.); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 19-20, 1970; Erie

I/AMA—**Atherosclerosis, Etiology and Treatment** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 14, 1970; Lancaster General Hospital

I—**The Etiology, Pathogenesis and Prevention of Atherosclerosis and Thrombosis** (Program in Continuing Medical Education—2 hrs. every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

April 22, 1970; Harrisburg Hospital

C—**Cardiopulmonary Resuscitation Instructors' Training Course**; by Pa. Heart Assoc., Harrisburg Hospital and South Central Pa. Heart Assoc; 8 hrs. AAGP credit approved; $15 fee. Contact Mrs. Kathryn M. Close, Exec. Dir., South Central Pa. Heart Assoc., 2915 Wayne St., Harrisburg 17111.

May 1, 1970; Philadelphia

C/AMA—**Cardiopulmonary Resuscitation Instructors' Course**: by Pa. Heart Assoc. and Heart Assoc. of Southeastern Pa.; at Jefferson; 8 hrs. AAGP credit approved; $15 fee. Contact John H. Killough, M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

"CODE KEY"

C—Consecutive days
I—Intermittent
O—Circuit
PG—Postgraduate Traineeship
R—Radio
TV—Television
S—Designed for full-time specialists
AMA—AMA Accredited Institution
C E S—Council on Education and Science, Pennsylvania Medical Society
Hahnemann—Hahnemann Medical College and Hospital
Hershey—Milton S. Hershey Medical Center
Jefferson—Jefferson Medical College of Philadelphia
Penn-Grad—University of Pennsylvania, Division of Graduate Medicine
Pitt—University of Pittsburgh School of Medicine
Pitt P.H.—University of Pittsburgh Graduate School of Public Health
Penn State—Pennsylvania State University
Temple—Temple University Health Sciences Center
U. of Pa.—University of Pennsylvania School of Medicine
Woman's—Woman's Medical College of Pennsylvania

May 7-8, 1970; Erie

I/AMA—**Pharmacologic Rationale of Treatment of Intractable Angina** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 21, 1970; Wilkes-Barre General Hospital

I/AMA—**Drugs and the Heart** (Program of Continuing Medical Education—One Thursday each month); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 26, 1970; Lancaster General Hospital

I—**Pain Patterns in the Master 2-Step Test. The Concept of Impending Angina** (Program in Continuing Medical Education—2 hrs. every other Tues. morning); at FonDerSmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

CHEST DISEASES

March 16–27, 1970; Allentown General Hosp.
July 13–24, 1970; Philadelphia (Hahnemann)
September 28–October 9, 1970; Wilkes-Barre V.A. Hosp.
November 30–December 11, 1970; Philadelphia (Hahnemann)

O/AMA—**A Workshop in Respiratory Intensive Care**; by Greater Delaware Valley Regional Medical Program; 10 consecutive days; 8 hrs. ea. day; max. regis.—15; 80 hrs. AAGP credit applied for. Contact R. F. Johnston, M.D., Head, Sect. of Chest Diseases, Hahnemann, 230 N. Broad St., Philadelphia 19102.

March 17, 1970; Chester

I/AMA—**Pulmonary Infiltrates: TB or Not TB?** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 24, 1970; Chester

I/AMA—**The Use and Abuse of Oxygen Therapy** (Program of Continuing Medical Education Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 31, 1970; Chester

I/AMA—**The Solitary Pulmonary Nodule**; (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center, 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia, 19107.

April 6–17, 1970; Philadelphia

PG/AMA—**Postgraduate Course in Bronchoesophagology**; at Temple; for chest physicians, thoracic surgeons, anesthesiologists and gastroenterologists. $350 fee. Contact Chevalier Jackson Clinic, Temple, 3401 N. Broad St., Philadelphia 19140.

May 21, 1970; Pottsville

I/AMA—**Acute Respiratory Failure; Diagnosis & Management** (Cont. Education Program 3rd Wed., 8 mos.); by Hahnemann at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

DERMATOLOGY

April 16, 1970; York Hospital

I/AMA—**Dermatologic Drug Reactions and Their Pathophysiology** (Program of Continuing Medical Education—each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

ELECTROCARDIOGRAPHY

May 6, 1970; Sayre

C—**Electrical Safety in the Hospital**; at Robert Packer Hosp.; by Donald Guthrie Medical Center; 7 hrs. Contact Wm. C. Beck, M.D., Guthrie Clinic, Guthrie Sq., Sayre 18840.

ENDOCRINOLOGY

March 1, 1970; Pittsburgh

PG/S/AMA—**Diagnosis and Treatment of Endocrine Abnormalities in the Female**; at The Western Pennsylvania Hospital; AAGP Credit. Contact Leonard E. Laufe, M.D., Western Pennsylvania Hosp., 4800 Friendship Ave., Pittsburgh 15224.

March 19, 1970; Pottsville

I/AMA—**Modern Treatment of Diabetes** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

March 19, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Parathyroid Gland.** (Program of Continuing Medical Education) by Jefferson & Penn State at St. Luke's Hospital; 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Phila. 19107.

March 22, 1970; Pittsburgh

PS/S/AMA—**Diagnosis and Treatment of Endocrine Abnormalities in the Male**; at The Western Pennsylvania Hospital; AAGP Credit. Contact Frank M. Mateer, M.D., Western Pennsylvania Hosp., 4800 Friendship Ave., Pittsburgh 15224.

March 26, 1970; York Hospital

I/AMA—**What's New in Endocrinology** (Program of Continuing Medical Education—Each Thursday, 3 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 16, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Adrenal Gland** (Program of Continuing Medical Education) by Jefferson and Penn State; at St. Luke's Hospital, 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Phila. 19107.

April 16, 1970; Pottsville

I/AMA—**Treatment of Hyperthyroidism** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

April 28, 1970; Johnstown

I/AMA—**Obesity** (Program of Continuing Medical Education—Last Tuesday—7 months); at Conemaugh Valley Memorial Hospital; by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

April 28, 1970; Lancaster General Hospital

I—**The Recognition and Treatment of Renal Complications of Diabetes** (Program in Continuing Medical Education—2 hrs., every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

May 7, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Ovary** (Program for Continuing Medical Education); by Jefferson and Penn State; at St. Luke's Hospital; 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 15, 1970; Scranton

I/AMA—**The Diabetic and Surgery** (Program of Continuing Medical Education—3rd Wed. ea. mo., 8 mos.); by Jefferson and Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 20, 1970; Reading

I/AMA—**Adrenal Disorders** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Community General Hosp. Contact Paul K. Stolz, M.D., Dir., Cont. Educ., Community General Hosp.; 135 N. 6th St., Reading 19601.

May 21, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Tumors of Nonendocrine Origin** (Program of Continuing Medical Education); by Jefferson & Penn State; at St. Luke's Hospital; 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Phila. 19107.

May 21–22, 1970; Erie

I/AMA—**Use and Misuse of Adrenocortical Steroids** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

GASTROENTEROLOGY

March 24, 1970; Reading

I—**Hepatitis** (1969–70 Continuing Education Program; 4th Tues. ea. mo.; 8 mos.); at St. Joseph's Hosp.; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

April 9, 1970; Allentown Hospital

I/AMA—**Ulcerative Colitis** (Program of Continuing Medical Education, 2nd Thursday each month 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 14, 1970; Chester

I/AMA—**Inflammatory Diseases of the Bowel** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 15, 1970; Scranton

I/AMA—**Preparation of and Post-operative Care of the Patient Requiring Surgery of the Hepato-Biliary Tract** (Program of Continuing Medical Education—3rd Wed. ea. mo. 8 mos.); by Jefferson and Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 21, 1970; Chester

I/AMA—**The Irritable Colon Syndrome and Diverticular Disease of the Colon** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 29, 1970; Chester

I/AMA—**Immunoglobulins and the GI Tract** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

June 1, 1970; Philadelphia

I/AMA—**Chronic Hepatitis** (Program of Continuing Medical Education); by Jefferson and Penn State; at Methodist Hospital; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

GENERAL MEDICINE

Every Thursday; Hazleton State General Hospital

I—**Program of Continuing Medical Education by Hazleton Branch, Luzerne County Medical Society.** Contact Robert Gunderson, M.D., Suite 412 Northeastern Building, Hazleton, Pa. 18201.

March 11, 1970; Sharon

C/AMA—**Hormones and Sexuality**; by Jefferson and Penn State; at Shenango Inn; 3 hrs. AAGP credit applied for; $5 fee. Contact John F. Coyne, M.D., Pres., Mercer Co. Med. Soc., c/o Westinghouse Elec. Corp., 469 Sharpsville Ave., Sharon 16147.

March 11–May 13, 1970; Lewistown Hospital

I—**Current Medical and Surgical Concepts** (A Pennsylvania Medical Continuing Education Program—ea. Wed., 10 sessions); by CES, 30 hrs. AAGP credit applied for; $25 fee ($5 single session). Contact Co.M.E., Pennsylvania Medical Society, Taylor Bypass & Erford Rd., Lemoyne 17043.

March 12–May 7, 1970; Tunkhannock

I—**Current Medical and Surgical Concepts** (An Edward Walter Clark Memorial Education Program—one Thurs., ea. mo., 3 sessions) by Educational and Scientific Trust of PMS; at Tyler Memorial Hosp.; 9 hrs. AAGP credit applied for. Contact Co.M.E., Pennsylvania Medical Society, Taylor Bypass & Erford Rd., Lemoyne 17043.

March 12, 1970; Allentown Hospital

I/AMA—**State of Renal Transplants** (Program of Continuing Medical Education, 2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 13, 1970; Williamsport Hospital

I/AMA—**The Physician's Role in Sex Education** (Program of Continuing Medical Education 2nd Fri. of each month); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 19, 1970; Altoona Hospital

I/AMA—**Aggressive Management of Patients with Stroke** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut St., Philadelphia 19107.

April 1, 1970; Allentown

I/AMA—**Errors in Emergency Practice** (8 week Education Program—1st Wed. ea. mo.); by U. of Pa.; at Sacred Heart Hosp.; 3 hrs. AAGP credit. Contact Robert F. Brennan, M.D., Sacred Heart Hosp., Allentown 18102.

April 2, 1970; Altoona Hospital

I/AMA—**Emotional Problems at Adolescence** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut St., Phila. 19107.

April 2, 1970; Pottsville Hospital

I/AMA—**Genetic Implications of Drugs and Radiation Exposure** (Program of Continuing Medical Education 1st. Thursday each month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 7, 1970; Chester

I/AMA—**Antibiotics—Uses and Abuses** (Program of Continuing Medical Education—Tuesday afternoon 38 weeks; by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 16, 1970; Altoona Hospital

I/AMA—**Diagnosis of Anemia** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 6, 1970; Allentown

I/AMA—**The Expanding Parameters of Medicine: Holography-Telemetry** (8 week Education Program—1st Wed. ea. mo.); by U. of Pa.; at Sacred Heart Hosp.; 3 hrs. AAGP credit. Contact Robert F. Brennan, M.D., Sacred Heart Hosp., Allentown 18102.

May 7, 1970; Altoona Hospital

I/AMA—**Short Course in Cardiac Auscultation** (Program of Continuing Medical Education—twice monthly); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 7, 1970; Pottsville Hospital

I/AMA—**Modern Management of Shock** (Program of Continuing Medical Education, 1st Thursday each month); by Jefferson and Penn State; 2 hrs AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 12; 1970; Lancaster General Hospital

I—**Problems of Drugs** (Program in Continuing Medical Education—2 hrs. every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed. Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

May 14, 1970; Allentown Hospital

I/AMA—**Use of Antibiotics** (Program of Continuing Medical Education—2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

June 4, 1970; Pottsville Hospital

I/AMA—**Thrombophlebitis—Incidence, Risks, Treatment** (Program of Continuing Medical Education 1st Thursday each month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

June 11, 1970; Allentown Hospital

I/AMA—**Advances in the Concepts of Chemotherapy** (Program of Continuing Medical Education—2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Wanlut St., Philadelphia 19107.

GERIATRICS

March 18, 1970; Scranton

I/AMA—**The Care of the Geriatric Patient Requiring Surgery** (Program of Continuing Medical Education—3rd Wed. ea. mo. 8 mos.); by Jefferson & Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

HEMATOLOGY

May 19, 1970; Chester

I/AMA—**The Hematologic Curse of Modern Drug Therapy** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 26, 1970; Chester

I/AMA—**Hematologic Manifestations of Systemic Disease** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

INTERNAL MEDICINE

Fourth Tuesday, each month; Altoona Hospital
First Tuesday, each month; Greensburg (Westmoreland Hosp.)
First Thursday, each month; Johnstown (Conemaugh Valley Mem. Hosp.)
Second Tuesday, each month; Natrona Heights (Allegheny Valley Hosp.)
Last Monday, each month; Uniontown Hospital
First Wednesday, each month; Washington Hospital

O/I—**Diagnosis and Management of Hypertension**; by Western Pa. Regional Medical Program and Pitt; AAGP credit applied for. Contact Alvin P. Shapiro, M.D., Project Dir., 501 Flannery Bldg., 3530 Forbes Ave., Pittsburgh 15213.

March 10, 1970; Chester

I/AMA—**Clinical Implications of New Discovered Hormonal Agents** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 6, 1970; Philadelphia

I/AMA—**Evaluation and Treatment of Hypertensive Emergencies** (Program of Continuing Medical Education—1st Mon., 8 mos.); by Jefferson and Penn State; at Methodist Hosp.; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 15, 1970; Reading

I/AMA—**Marital and Sexual Counseling for the Internist** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Community General Hosp. Contact Paul K. Stolz, M.D., Dir., Cont. Ed. Community Gen. Hosp., 135 N. 6th St., Reading 19601.

May 4, 1970; Philadelphia

I/AMA—**Extra Cranial Vascular Occlusions** (Program of Continuing Medical Education); by Jefferson and Penn State; at Methodist Hosp.; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

MALIGNANT DISEASE

April 22–May 27, 1970; Philadelphia

I—**Cancer Detection in Office Practice** (5 consecutive Wed. afternoons); by American Cancer Society; at American Oncologic Hosp.; 20 hrs. AAGP credit; limited to 8 per group. Contact Joseph G. Strawitz, M.D., Assoc. Dir., American Oncologic Hosp., Central & Shelmire Aves., Philadelphia 19111.

MENTAL RETARDATION

April 13–17, 1970; Elwyn

C—**Fourth Annual Symposium on Mental Retardation**; at Elwyn Institute; 7 hrs. each day; $25 fee. Contact Gerald R. Clark, M.D., President, Elwyn Institute, 111 Elwyn Rd., Elwyn 19063.

NEUROLOGY

April 8, 1970; Philadelphia

C/MA—**Teaching Day in Neurology**; at Albert Einstein Medical Center; 6 hrs. AAGP credit; $25 fee (includes lunch). Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Roads, Philadelphia 19141.

April 28, 1970; Reading

I—**Diagnosis and Treatment of Increased Intracranial Pressure** (1969–70 Continuing Education Program; 4th Tues. ea. mo.; 8 mos.); at St. Joseph's Hosp.; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

OBSTETRICS & GYNECOLOGY

March 11, 1970; Philadelphia

C/AMA—**Contraception and Management of the Infertile Couple**; at Albert Einstein Medical Centers; 5 hrs. AAGP credit; $25 fee (includes lunch). Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Roads, Philadelphia 19141.

April 23–24, 1970; Erie

I/AMA—**Breast Carcinoma** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 30, 1970; York Hospital

I/AM—**Pathophysiology of Fallopian Tube Function** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, PhD., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

OPTHAHLMOLOGY

April 15–17, 1970; Pittsburgh

C/S—**Ophthalmic Micro Surgery**; by Pitt; at Eye and Ear Hospital; 8 hrs. each day; $350 fee; Maximum registration—12. Contact Kenneth T. Richardson, M.D., Eye and Ear Hospital, 230 Lothrop St., Pittsburgh 15213.

April 20–22, 1970; Pittsburgh

C/S—**The Glaucomas**; by Pitt; at Eye and Ear Hospital; 8 hrs. each day; $150 fee; Maximum registration—20. Contact Kenneth T. Richardson, M.D., Eye and Ear Hospital, 230 Lothrop St., Pittsburgh 15213.

August 3–7, 1970; Pittsburgh

C/S—**The Management of Retinal Detachment**; by Pitt; at Eye & Ear Hosp.; 8 hrs. ea. day; $250 fee; max. regis.: 12. Contact Wm. G. Everett, M.D., Eye and Ear Hosp., 230 Lothrop Street, Pittsburgh 15213.

ORTHOPEDICS

March 19, 1970; York Hospital

I/AMA—**Concepts of Bone Healing** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 26, 1970; Reading

I—**Bone Diseases** (1969–70 Continuing Education Program; 4th Tues. ea. mo.; 8 mos.); at St. Joseph's Hosp.; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

PEDIATRICS

March 12, 1970; York Hospital

I/AMA—**What's New in Infectious Diseases in Children** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

education

March 31 1970; Johnstown

I/AMA—**Neonatal Respiratory Syndromes** (Program of Continuing Medical Education—Last Tuesday, 7 months); at Conemaugh Valley Memorial Hospital; by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 31, 1970; Lancaster General Hospital

I—**The Innocent Murmur in the School Child** (Program in Continuing Medical Education—2 hrs., every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

April 9–10, 1970; Erie

I/AMA—**Fever of Unknown Origin in a Pediatrics Population** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks, every other Thurs. eve. and Fri. morning; by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 12–15, 1970; Philadelphia

C—**19th Annual Pediatric Postgraduate Seminar;** at St. Christopher's Hospital for Children; 6 hrs. each day; $100 fee. Contact John B. Bartram, M.D., Director, Division of Service to Handicapped, St. Christopher's Hospital, 2600 N. Lawrence St., Philadelphia 19133.

PHYSIOLOGY

April 2, 1970; York Hospital

I/AMA—**Physiology of Renal Function, Revisited** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Associate Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

April 9, 1970; York Hospital

I/AMA—**The Physiology of Contractility and Cardiac Failure** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 9–11, 1970; Philadelphia

C/AMA—**Current Concepts in Physiology of the Gastrointestinal, Endocrine and Respiratory Systems;** by American College of Physiology and American Physiological Society; at Holiday Inn; $60 fee—ACP members ($100, non-members). Contact Daniel H. Simmons, M.D., Director, ACP, 4200 Pine Street, Philadelphia 19104.

April 23, 1970; York Hospital

I/AMA—**The Physiology of Acidosis** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

PSYCHIATRY

Fourth Friday each month, September, 1969–June, 1970; Butler

I—**Physician-Community Psychiatrist Seminar;** by Mental Health Guidance Clinic of Butler Co.; at YWCA; Hour for hour AAGP credit. Contact Robert L. Eisler, M.D., Mental Health Guidance Clinic, 128 S. Main St., Butler 16001.

March 3–April 7, 1970; Philadelphia

I/S—**Psychopharmacology** (Continuing Education for Psychiatrists; ea. Tues.; 6 weeks); at The Institute of the Pa. Hosp.; Max. regis. — 30; $50 fee. Contact Gerald J. Margolis, M.D., Coordinator, Institute of Pa. Hosp., 111 N. 49th St., Philadelphia 19139.

March 17, 1970; Lancaster General Hospital

I—**Current Concepts in the Diagnosis and Management of Depression** (Program in Continuing Medical Education—2 hrs., every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

March 19, 1970; Wilkes-Barre General Hospital

I/AMA—**Battle of the Sexes—Is Marriage Worth Saving?** (Program of Continuing Medical Education—one Thursday each month); by Jefferson and Penn State; 3 hours AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

March 26–May 28, 1970; Philadelphia

I/AMA—**Clinical Seminars in Medical Psychiatry;** at Hahnemann; ea. Thurs.; 10 weeks; AAGP credit applied for. Contact H. G. Zerof, M.D., Dir. Community Education, Hahnemann, 230 N. Broad St., Philadelphia 19102.

April 1–June 3, 1970; Philadelphia

I/AMA—**Clinical Seminars in Medical Psychiatry (Advanced)**; at Hahnemann—Each Wednesday, 10 weeks; AAGP credit applied for. Contact Paul J. Fink, M.D., Hahnemann, 230 N. Broad St., Philadelphia 19102.

April 3–May 22, 1970; Norristown State Hospital

S/I—**Adolescent Psychiatry** (Program of Continuing Education for Psychiatrists—ea. Fri., 8 weeks); $25 fee. Contact John D. Pruitt, M.D., Norristown State Hosp., Stanbridge and Sterigere Sts., Norristown 19401.

RADIOLOGY AND RADIOISOTOPES

May 5, 1970; Chester

I/AMA—**The Use of Isotopes in Medicine** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 12, 1970; Chester

I/AMA—**Heavy Dose Irradiation—When Does it Palliate?** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 26, 1970; Johnstown

I/AMA—**Newer Diagnostic Aspects in Radiology** (Program of Continuing Medical Education—last Tuesday, 7 months); at Conemaugh Valley Memorial Hospital; by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

SURGERY

April 16, 1970; Wilkes-Barre General Hospital

I/AMA—**Surgical Aspects of Inflammatory Diseases of the Bowel** (Program of Continuing Medical Education—one Thursday each month); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc, Dean, Jefferson, 1025 Walnut Street. Philadelphia 19107.

UROLOGY

March 18, 1970; Philadelphia

C/AMA—**Developments in Kidney Disease;** at Albert Einstein Medical Center; 6 hrs. AAGP credit; $25 fee (includes lunch). Contact Solomon Mintz M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Roads, Philadelphia 19141.

PENNSYLVANIA MEDICINE cardiovascular briefs

Post-Infarction Convalescence Program

Part 1

Irving Imber, M.D. questions William G. Leamen, Jr., M.D., Fellow, Council on Clinical Cardiology, Unionville, Pennsylvania.

How is the program of activity handled immediately following a myocardial infarction?

Since the Coronary Care Units and our increased insight into the nature of the disease itself have enabled us to save more cases of recent myocardial infarction, the prescription of increasing activity for the patient after the first few days now assumes even more importance. Whenever possible, these patients should not be kept at total bed rest for prolonged periods (for four to six weeks, as was the custom ten to fifteen years ago). To do this would only invite the complications we are so anxious to avoid.

How soon, then, should activities be resumed?

Return to a normal life as soon as possible is the goal, particularly when the infarct involves a small area and recovery has been smooth. Such patients should be allowed to increase activities as tolerated at a relatively early date (about one to two weeks after infarction), provided excessive fatigue, dyspnea and other symptoms can be avoided. The final judgment, however, should rest on the physician's assessment of the patient as a whole (severity of the initial lesion, response to first activity, etc.).

How does one balance the exercise prescription in the presence of the occurrence or recurrence of angina?

Under these conditions the patient soon learns the limits of his own tolerance. Exercise that produces chest pain should be curtailed. However, as progress occurs, it is safe to say that ordinary activities can be performed without injuring the heart. We should aim to avoid too many restrictions and boredom. Normal contacts with friends and business associates for limited periods should be encouraged. These help to bring about a healthy mental attitude toward the cardiac status.

What forms of exertion do we allow following a proved myocardial infarction?

Provided the patient is not overweight, walking is an excellent form of activity. If overweight, the importance of diet should be stressed, and the patient should be warned against exercise immediately following a meal. Golf and swimming should be allowed for those who previously were regular participants in these forms of exertion. Competitive activities (soft ball, tennis, squash, etc.), however, should be avoided.

Should the post-infarction patient be allowed to drive a car?

Here, again, every patient should be viewed as an individual by his own physician. However, for the first few months the post-infarction patient should not drive unaccompanied. Pushing a car or changing a tire, of course, is contraindicated.

Do you consider these patients to be totally disabled following a recent myocardial infarction?

No. Retirement is not in order if the patient's convalescence has been uncomplicated. While at first much planning will be needed to arrange suitable transportation to work, this part of the program can usually be solved. Extracurricular activities (civic or philanthropic), should be omitted at first. The total working hours should also be reduced. As progress takes place, the time at work may be gradually increased, although the total work load should be lessened. Out-of-town trips should be avoided and help in carrying out some of the daily responsibilities is in order. A full hour for lunch should be the rule.

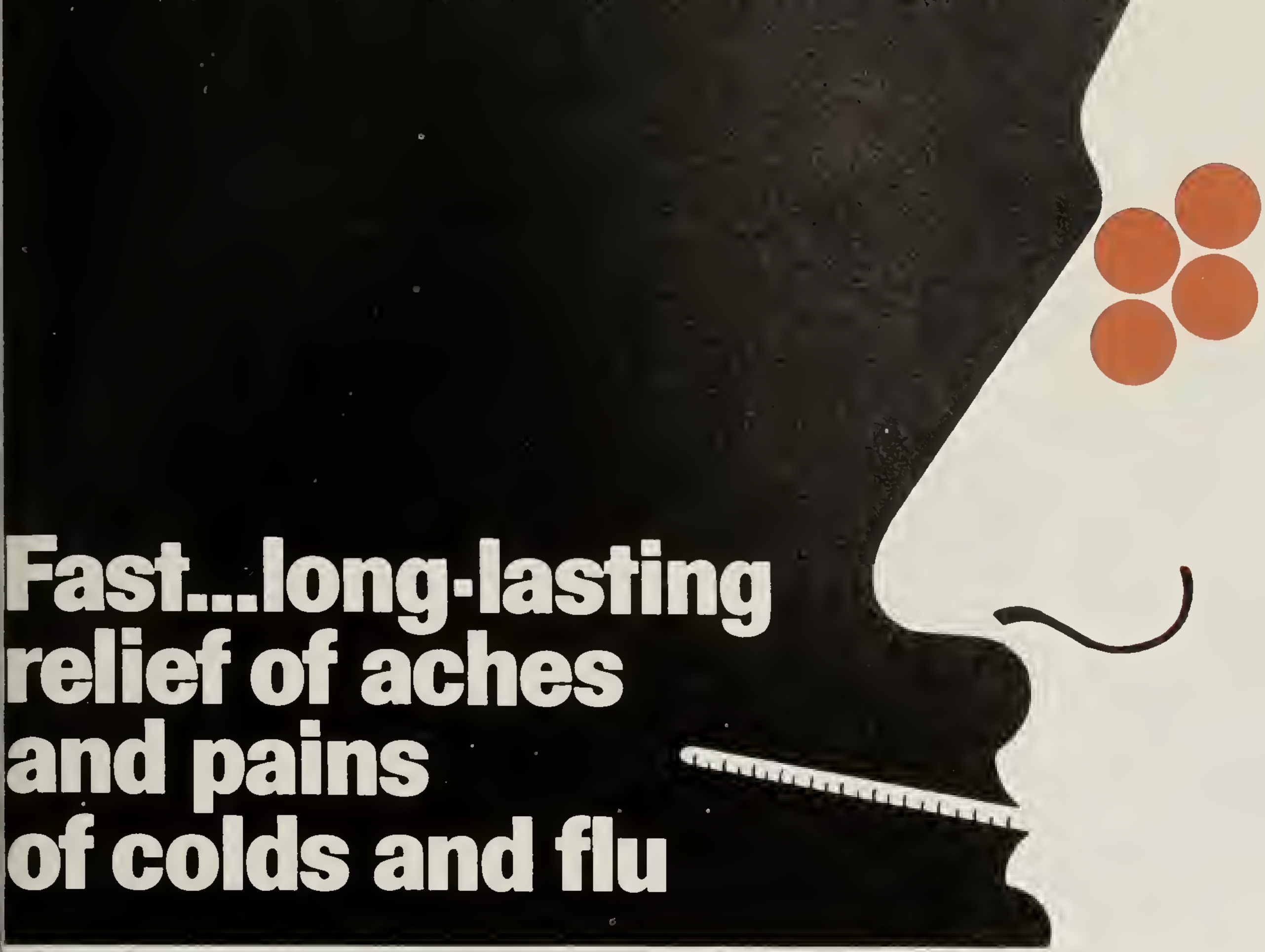
At this stage of convalescence are any special tests useful in evaluating the status of the coronary circulation?

No single special test is at present available as far as prognosis is concerned. While more than one-half of the post-infarction patients give a history of angina, many show a completely normal electrocardiogram. Others may have considerable coronary artery involvement and be entirely symptom-free. The assessment of the degree of coronary damage under these conditions is most difficult. Today a widely used procedure is testing the effect of exercise on the electrocardiogram (Master test). Here the depth of the depression of the S-T segments of the ECG is considered to be of prognostic significance although it is, by no means, a fool-proof guide. In the end, the physician's knowledge of the patient's past history regarding exercise is more reliable.

Is coronary arteriography of value?

The accuracy of coronary arteriography in localizing the seat of obstruction(s) to the coronary blood flow is not always dependable. In the light of results at present, is seems unnecessary to submit a patient to the discomfort of this procedure.

This brief is prepared by William G. Leaman, Jr., M.D. for the Council on Education and Science, in cooperation with the Pennsylvania Heart Association.



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PENNSYLVANIA MEDICINE cancer forum

The Prevention of Cancer

Is cancer really preventable or is that just a figure of speech?

Many cancers are indeed preventable. Where a specific etiologic agent has been found, prevention is possible. Epidemiology has made many important contributions to this aspect of cancer control. By identifying environmental agents as causes of various cancers, it is usually possible to develop specific preventive measures.

Do you mean environment is the whole story?

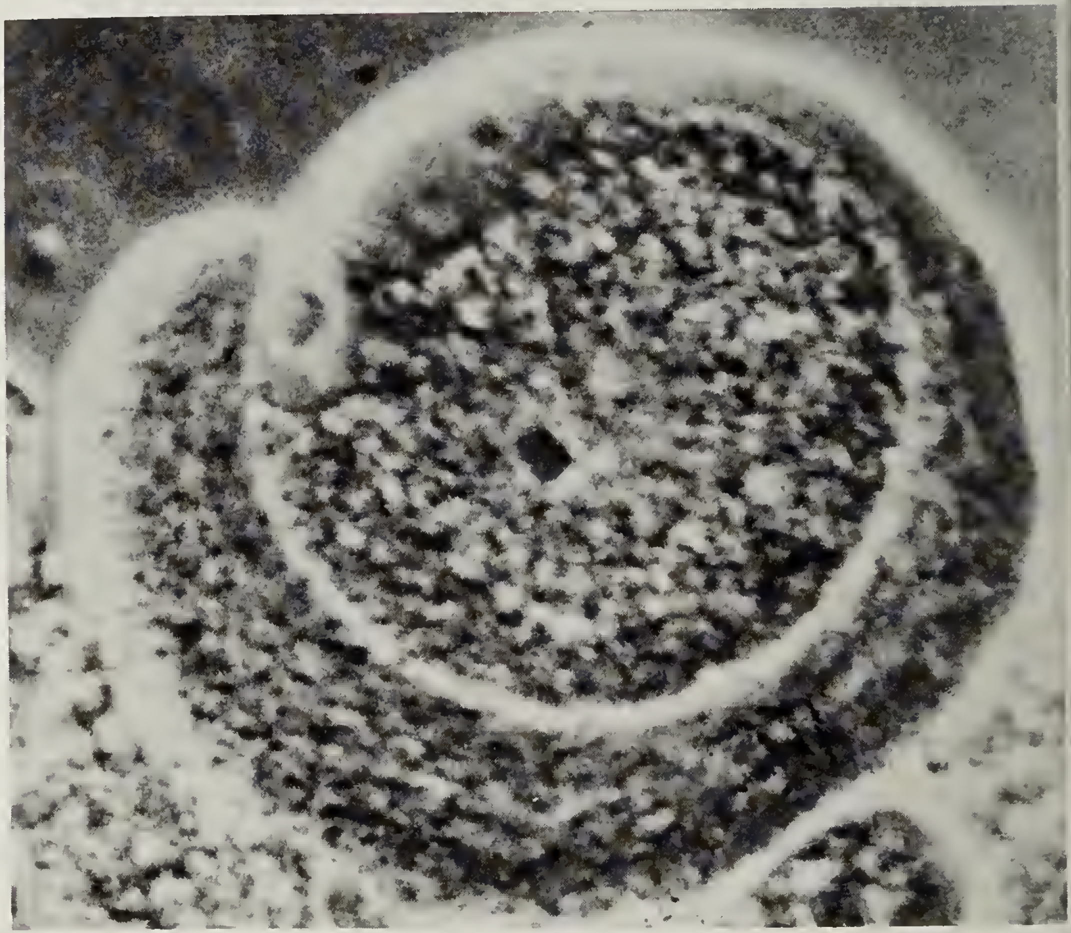
No, genetic differences play a certain role but not a dominant one. Lung cancer is the most common tumor in U.S. men. In Japan it is cancer of the stomach and in Taiwan, cancer of the nasopharynx. Cancer of the female breast is six times as common in the U.S. as in Japan. Carcinoma of the uterine corpus is ten times more common in the U.S. than Japan and is practically unknown among the Bantu.

It is doubtful if genetics can account for such wide differences. Further, there is evidence that if you change your location from one country to another the cancer risk also changes. Also, as we know, socio-economic factors also play a part.

Which are the preventable cancers?

Most of the scientific community agree that lung cancer is preventable by eliminating cigarette smoking. The difference of incidence between the smoking and non-smoking population; the increasing risk with increased number of cigarettes smoked and the reduced risk in those who stop smoking are well known. It has been estimated that 90 per cent of the lung cancer incidence could be prevented by the elimination of cigarette smoking.

Ionizing radiation has been shown to increase the incidence of leukemia even in doses under 100 rads. Cancer of the lung is higher in uranium miners both in the famous Schneeburg mines and in our own in the Colorado Plateau. Also, skin cancer is associated with radiation.



Abnormal behavior *of a living human lung cancer cell is demonstrated in this photograph, where most of the cell's cytoplasm can be seen whirling around the central portion of the diseased cell. The cause of the motion is not known.*

What occupational exposures are there?

Skin cancer in outdoor workers is probably best known. It also occurs in those working with crude oil as well as those working with inorganic arsenic. Lung cancer must be mentioned again. It is found in asbestos workers as well as those working in mustard gas, nickel and coal gas production.

Bladder cancer in aniline dye workers is probably the best documented of all the occupational cancers.

Where does cancer detection fit into this?

In the control of cancer it is always better to prevent the cancer, if that is possible. In the case of lung cancer, prevention is the only means of control since lung cancer is almost never found early enough for cure. The circumstances in cancers such as carcinoma of the uterus, colon and skin are quite different. Here we have a relatively long lead time between curability and incurability and we have means of finding such cancers early. Breast cancers are also in this category but present more difficulty in early detection. Nevertheless, a strong case can be made for the annual comprehensive physical examination.

CANCER FORUM — presented cooperatively by the PMS Council on Education and Science, The Pennsylvania and Philadelphia Divisions of the American Cancer Society, and the Cancer Control Section, Pennsylvania Department of Health. The Cancer Forum is edited by Roland A. Loeb, M.D., Lancaster.

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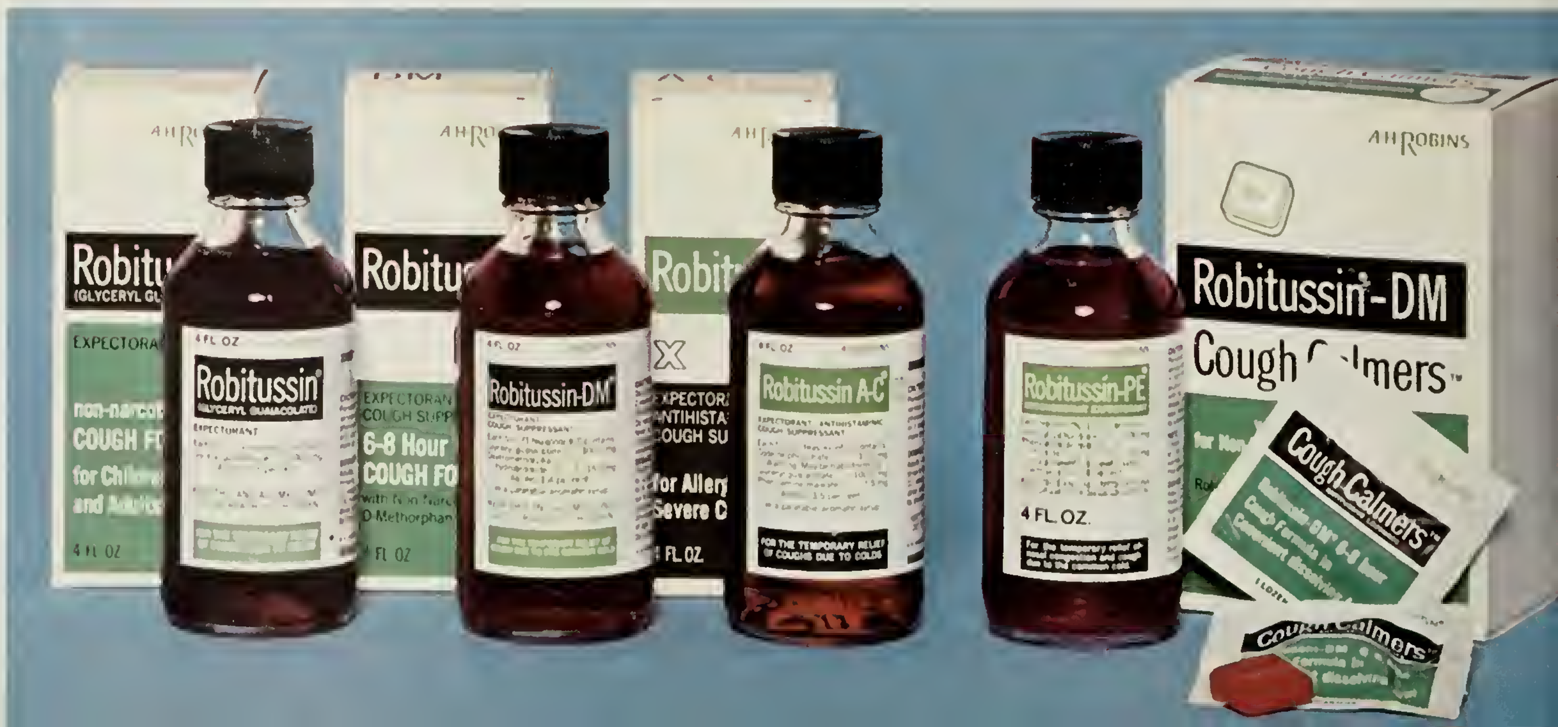

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PENNSYLVANIA MEDICINE

obituaries

○ **Indicates membership in the Pennsylvania Medical Society at time of death.**

○ **Thomas V. Lerch,** Reading; Jefferson Medical College, 1937; age 58; died November 2, 1969. He was in the Army Medical Corps in World War II, and was chief of proctology at Reading Hospital. Survivors include his wife, four daughters, two brothers, and his father, Charles E. Lerch, M.D., now retired.

○ **Paul E. McGeorge,** Ambridge; University of Pittsburgh School of Medicine, 1941; age 54; died October 20, 1969. He was a past president of the Sewickley Valley Hospital staff. He is survived by his wife, two sons, and two daughters.

○ **J. West Mitchell,** Sewickley; University of Pittsburgh School of Medicine, 1917; age 86; died October 21, 1969. He was a founder of the American Diabetic Association and a professor of medicine at the University of Pittsburgh from 1935 until 1960. He served in the Army Medical Corps during World War I and held several posts in the Pennsylvania Medical Society during his long career. Surviving are a daughter and a son.

○ **William B. Spinelli,** Pittsburgh; Hahnemann Medical College, 1930; age 64; died November 3, 1969. He was an internist and had practiced medicine for thirty-five years. Surviving are his wife, two sons, two daughters and two brothers, Anthony Spinelli, M.D. and Albert M. Spinelli, M.D.

○ **Wilbur L. Archer, Jr.,** Philadelphia; Temple University School of Medicine, 1925; age 71; died November 3, 1969. He was a practicing physician for forty-four years. Surviving are a niece and a nephew.

○ **Hiram H. Armstrong,** Harrisburg; Northwestern University School of Medicine, 1937; age 59; died December 13, 1969. He was head of the department of otolaryngology at Harrisburg Hospital. He is survived by his wife, a son, two daughters and a sister.

○ **Walter H. Bush,** St. Petersburg, Fla.; University of Cincinnati College of Medicine, 1905; age 89; died May, 1969. He had practiced in Emporium prior to his retirement fifteen years ago. He is survived by his wife.

○ **Peter J. Casterline,** Wilkes-Barre; Hahemann Medical College, 1936; age 61; died November 26, 1969. He had been in practice in Wilkes-Barre since 1932, and had served as city councilman and county treasurer as well. Surviving are his wife, three daughters, three brothers, and three sisters.

○ **Walter H. Caulfield,** East Stroudsburg; Jefferson Medical College, 1930; age 66; died December 11, 1969. He was a past president of the Monroe County Medical Society, and had practiced in East Stroudsburg for twenty-eight years. Surviving are his wife, two sons, one of whom is Walter H. Caulfield, Jr., M.D., San Rafael, Calif., and a sister.

○ **William H. Eister,** Sunbury; Jefferson Medical College, 1908· age 88; died December 15, 1969. Dr. Eister received the PMS Fifty-year Award in 1958, and was a past president of the Northumberland County Medical Society. He is survived by his wife, a daughter, and three sons, one of whom is Donald H. Eister, M.D., Sunbury.

○ **Russell M. Evans, Jr.,** New Kensington; Hahnemann Medical College, 1940; age 53; died December 11, 1969. The son of a doctor, he practiced general medicine for fourteen years before specializing in obstetrics and gynecology. He served as a captain in the Army Medical Corps during World War II. Survivors include his wife, a son, two daughters, a brother and a sister.

○ **Louis C. Jacobs,** Harrisburg; Jefferson Medical College, 1931; age 63; died December 20, 1969. He was a veteran of World War II and was past president of the Central Pennsylvania Arthritis Foundation. Surviving are his wife, two daughters and three brothers.

○ **James H. Kates,** Philadelphia; Temple University School of Medicine, 1923; age 69; died November 20, 1969. He served in both world wars, and had practiced as an ear, nose and throat specialist for forty-five years. Survivors are his wife, a daughter, two brothers and a sister.

○ **Harold G. Kuehner,** Pittsburgh; University of Pittsburgh School of Medicine, 1918; age 75; died December 1, 1969. He was a fellow of the American College of Surgeons, and was a surgeon at Mercy Hospital for forty years. Survivors include his wife and two daughters, one of whom is Joanne K. Robinson, M.D., Fox Chapel.

○ **Charles W. Lewis,** Uniontown; Howard University College of Medicine, 1928; age 77; died December 5, 1969. He had practiced medicine in Uniontown since 1932. He is survived by a brother.

○ **Francis C. Lutz,** Rosemont; Jefferson Medical College, 1923; age 69; died August 6, 1969. He is survived by his wife.

○ **Watson Marshall,** Pittsburgh; Johns Hopkins University Medical School, 1903; age 94; died December 10, 1969. He was the founder of the Pittsburgh Otology Society and a fellow of the American Academy of Ophthalmology and Otolaryngology. He is survived by three sons.

○ **Egbert T. Scott,** Philadelphia; Leonard Medical School, Raleigh, N. C., 1913; age 85; died December 4, 1969. He received the PMS Fifty-year Award in 1963. He was a lieutenant colonel in the U.S. Army Reserve, and served in France during World War I. He is survived by his wife, a daughter and a son.

○ **Charles H. Witmer,** Lancaster; University of Pennsylvania School of Medicine, 1909; age 84; died November 20, 1969. He was recipient of the PMS Fifty-year Award in 1959. He was a past president of the Lancaster County School Board and was a director of the American Thoracic Society. Survivors include his wife and two sons, one of whom is Robert H. Witmer, M.D.

○ **Thomas Aceto,** Philadelphia; Universita di Napoli, Italy, 1923; age 70; died September 21, 1969. He is survived by his wife.

○ **Ernest J. Aten,** Sewickley; Western Reserve University School of Medicine, 1915; age 79; died January 14, 1970. He was a veteran of World War I. He is survived by his wife, a sister and a brother.

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PENNSYLVANIA MEDICINE

meetings

MARCH

Mediclinics Postgraduate Medical Refresher Course, March 9–19, 1970, Galt Ocean Mile Motel, Fort Lauderdale, Fla. Contact Mediclinics, 832 Central Medical Bldg., St. Paul, Minn. 55104.

American College of Surgeons Sectional Meeting for Doctors and Nurses, March 16–18, 1970, Washington, D.C. Contact American College of Surgeons, 55 E. Erie St., Chicago, Ill. 60611.

APRIL

American Society of Internal Medicine Fourteenth Annual Meeting, April 10–12, 1970, Warwick Hotel, Philadelphia. Contact ASIM, 525 The Hearst Building, Third at Market, San Francisco, Calif. 94103.

PMS Officers' Conference, April 22–23, 1970, Penn Harris Motor Inn, Lemoyne.

Pennsylvania Dietetic Association, April 30–May 1, 1970, Marriott Motor Hotel, Philadelphia.

MAY

International Cancer Congress, May 22–29, 1970, Albert Thomas Convention Center, Houston, Texas. Contact: Office of the Secretariat, Tenth International Cancer Congress, P. O. Box 20465, Astrodome Station, Houston, Tex. 77025.

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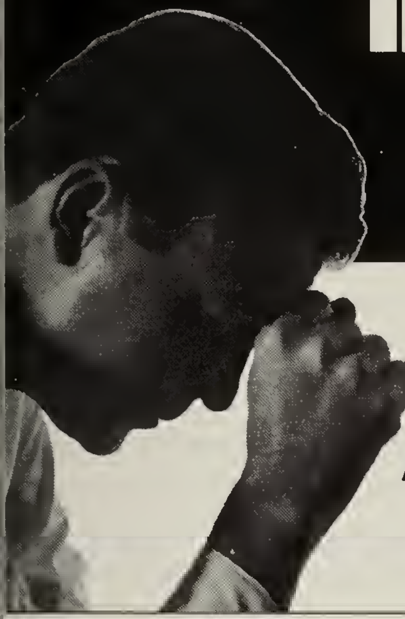

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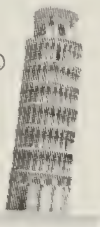

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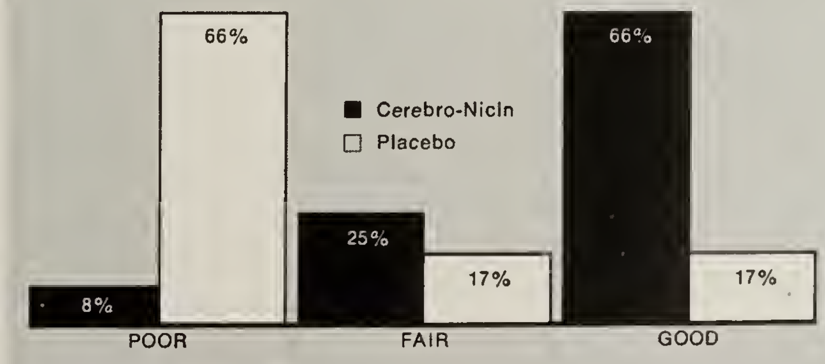

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PENNSYLVANIA MEDICINE in my opinion

Hospital Electrical Hazards: A Serious Problem for Patients

It has been estimated that about 1,200 patients are electrocuted annually in U.S. hospitals. This number, derived from an insurance company study, is probably optimistically low, but points up the need for increased awareness of the electrical shock hazards in hospitals today.

Shock hazards can come from two sources—equipment and wiring. One reason for their insidious nature is the fact that the hazards can exist without affecting equipment performance. As an example, virtually all electrical equipment has been supplied with three-prong power plugs for the last few years. However, many hospitals lack three-wire outlets, necessitating the use of adapter plugs. Due to lack of time or knowledge, the pigtail wire from the adapter is rarely grounded. In some hospital equipment, this puts about 60 volts on the chassis, making it a definite shock hazard to patients and personnel. Since the equipment function is in no way impaired, the hazard is discovered only by someone being shocked.

A number of cases have been noted where nurses and other personnel are aware of hazards such as described, but because the equipment functions properly, they merely train themselves to be cautious in handling it. Due to their normally high skin resistance and the diffuse path which the current takes through their body, this type of shock is usually more of an annoyance than a threat of electrocution to healthy personnel.

Consider, though, the postoperative patient whose blood pressure is being monitored via a cathether. The blood in the catheter is an excellent conductor of electricity. The catheter usually connects to a stainless steel stopcock, which could very well be touching the grounded bed frame, probably via a urine or sweat soaked sheet and conductive rubber sheet beneath it. The patient now has a very low resistance path from his heart to ground. Touching the chassis of the equipment described above will probably be lethal. Similar conditions occur with simple intravenous routes, needle, or pacemaker electrodes.

The preceding example is, of course, not the only one involving shock hazards. Three-prong receptacles can become unsafe if somehow the integrity of the ground is broken; well-designed equipment can become lethal if patient cables or power cords become frayed and damaged.

A number of solutions exist to the electrical safety problem. Minimally, all outlets in patient areas should be changed to three-prong outlets, and all two-prong adapters confiscated and destroyed. The wiring integrity of these outlets should be checked at six-month intervals. All electrical devices, lamps, beds, and monitor cables used in patient areas should likewise be checked at least semi-annually, preferably more often. Inspection should not be done by the personnel or department responsible for original installation, maintenance, or repairs, but by another party. It has been demonstrated time and again that cursory and inadequate checking procedures can be expected unless an independent party is involved. The principle that authors are rarely their own best critics or proofreaders applies.

Ideally, isolation transformers should be installed for outlets in special patient areas, such as CCU, ICU, Cardiac Catheterization Laboratory, and ultimately in all patient areas. These transformers make it almost impossible for a single fault such as an ungrounded piece of equipment to present a shock hazard. In a circuit served by an isolation transformer, a grounded patient can even stick his finger into a light socket without receiving a shock. In such circuits, two simultaneous faults are required for a shock hazard to exist. Since electrical leakage paths, which constitute one fault, do not usually affect equipment operation, ground fault detection equipment should be installed so that these defects are noted immediately.

Because most hospitals lack the necessary biomedical engineering capability, and most outside electrical contractors or hospital maintenance departments do not generally understand the intricate relationships between sophisticated equipment, power circuits, patients, and users, outside assistance is usually required. Electrical safety surveys should be conducted by competent biomedical engineers who have no inherent interest in making the survey report disguise deficiencies and who are not selling safety or medical devices. Outlets and electrical equipment should be periodically and individually checked, certified, and tagged. No untagged equipment should then be permitted in CCU, ICU, Cardiac Catheterization Laboratory, or near patients with any needle, catheter, or other device which penetrates the skin.

A heightened awareness of these hazards by clinical personnel should be effectively channeled by establishing a formal reporting procedure. Worn cables, loose connectors, uncertified equipment, or overt electrical shock should be reported to a department capable of a competent response.

With the increasing use of electrical monitoring equipment, it is inevitable that new safety regulations will be promulgated. In the interim, however, it behooves the hospitals to be aware of and correct electrical shock hazards in both old and new buildings and equipment.

Joel J. Nobel, M.D., Director of Research
Robert Mosenkis, Senior Project Engineer
Emergency Care Research Institute, Philadelphia.
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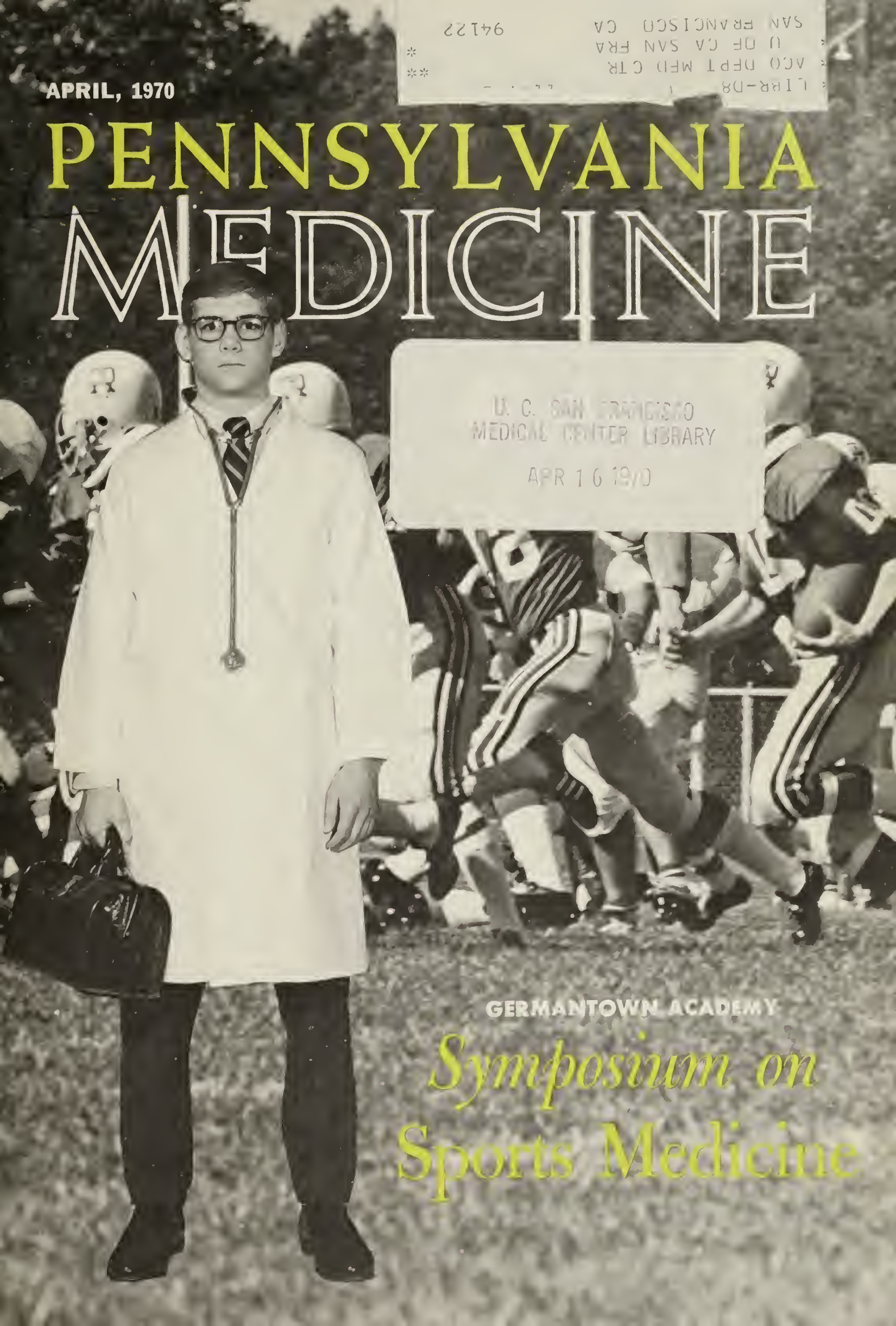

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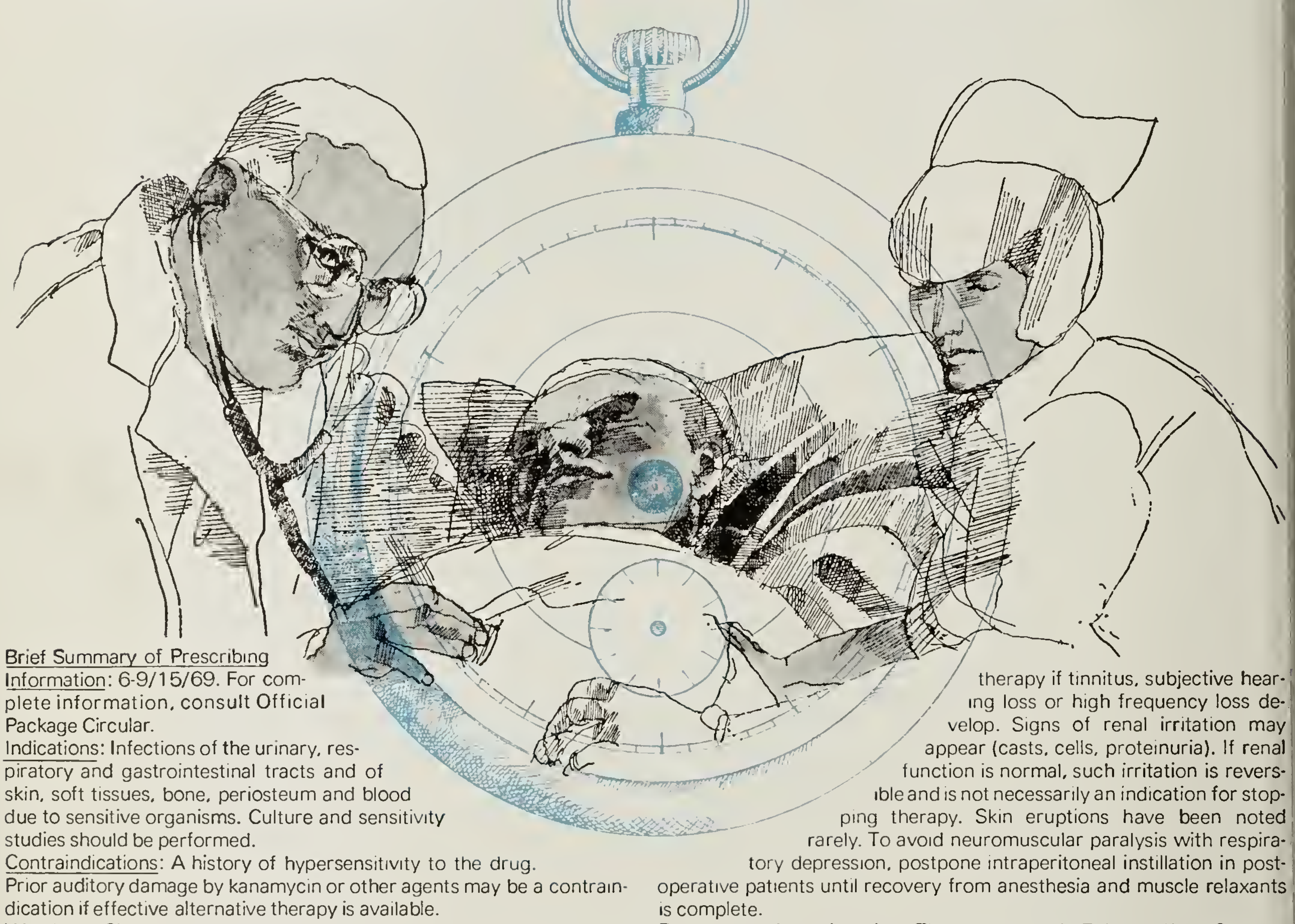

Brief Summary of Prescribing Information: 6-9/15/69. For complete information, consult Official Package Circular.
Indications: Infections of the urinary, respiratory and gastrointestinal tracts and of skin, soft tissues, bone, periosteum and blood due to sensitive organisms. Culture and sensitivity studies should be performed.
Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.
Warnings: Since the drug is excreted almost entirely by glomerular filtration, renal malfunction can cause abnormally high serum levels of kanamycin which may prove ototoxic. Assess renal function periodically, both before and during therapy. Renal dysfunction or pre-renal azotemia sharply increase the risk of ototoxicity and permanent deafness. In such cases decrease the size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. In older patients and patients receiving a total dose in excess of 15 Grams, watch carefully for signs of ototoxicity.
Precautions: If mycotic or bacterial superinfection occurs, discontinue kanamycin and initiate appropriate therapy. Cumulative ototoxic effects may be produced by concurrent or consecutive use of other ototoxic drugs. High doses may cause irritation at injection sites. The drug *should not* be physically mixed with other antimicrobials.
Adverse Reactions: Severe irreversible hearing loss may occur. Stop therapy if tinnitus, subjective hearing loss or high frequency loss develop. Signs of renal irritation may appear (casts, cells, proteinuria). If renal function is normal, such irritation is reversible and is not necessarily an indication for stopping therapy. Skin eruptions have been noted rarely. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in postoperative patients until recovery from anesthesia and muscle relaxants is complete.
Dosage and Administration: The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gram daily and should not exceed 1.5 Gram even in the heaviest patients. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours.
Supplied: Rubber capped vials as a ready-to-use sterile aqueous solution in two concentrations: 0.5 Gm. in 2 ml. 1.0 Gm. in 3 ml.
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PENNSYLVANIA MEDICINE

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APRIL, 1970

PHILADELPHIA'S DR. PENDERGRASS RECEIVES DISTINGUISHED SERVICE AWARD

Eugene P. Pendergrass, M.D., of Wynnewood, member of the Philadelphia County Medical Society, has been selected to receive the rare Distinguished Service Award of the Pennsylvania Medical Society for his outstanding contributions in radiology and medical organizational leadership. The award, an engraved silver medal, will be presented to him at the PMS State Dinner October 6, 1970, at Host Farm Motel, Lancaster, as part of the Annual Session of the House of Delegates. There have been only three previous recipients of the State Society's highest physician award in its fourteen-year history. Jonas Salk, M.D., then of Pittsburgh, was the first recipient in 1956. John H. Gibbon, Jr., M.D., Philadelphia, developer of the heart-lung machine, received the award in 1962, and James Z. Appel, M.D., Lancaster, former AMA president, was given the honor in 1968.

CENTRE COUNTY ENTRIES WIN BOTH RUSH AWARDS

For the first time in the twenty-two year history of the PMS Benjamin Rush Awards, both the individual and group awards have been won by entries from the same county. Mrs. Ruth Harris, Snow Shoe, an insurance agent and broker, won the individual award for the time and energy she has given for more than a decade to an impressive list of worthy organizations. The Philipsburg Women's Club was awarded the group commendation for its support of a number of health and welfare causes, including providing eyeglasses for needy children, sponsoring a local bloodmobile, and providing services at Philipsburg State Hospital. Park M. Horton, M.D., chairman of the PMS Board of Trustees, announced that the awards would be made during the Annual Session at Host Farm Motel, Lancaster, in October.

PENNSYLVANIANS ATTEND WORKSHOP

Pennsylvania physicians attending the AMA-AMPAC Workshop last month in Washington, D.C. were: William A. Barrett, M.D., Pittsburgh, PMS president; William A. Limberger, M.D., West Chester, president-elect; Robert F. Beckley, M.D., Lock Haven, immediate past-chairman of PaMPAC; Carl B. Lechner, M.D., Erie, medical editor of PENNSYLVANIA MEDICINE; George W. Shaffer, M.D., Blooming Glen, PaMPAC vice-chairman; David S. Masland, M.D., Carlisle, Board of Trustees vice-chairman; Robert J. Carroll, M.D., Pittsburgh, PaMPAC board member; Park M. Horton, M.D., New Milford, chairman of the Board of Trustees; and R. Edward Steele, M.D., Harrisburg, PaMPAC board member. An AMPAC Award for "its outstanding contribution to the political action movement and the political leadership it has demonstrated during the past year," was presented to the Pennsylvania Medical Political Action Committee by James H. Sammons, M.D., chairman of the AMPAC Board of Directors. Dr. Shaffer accepted for PaMPAC.

PAMPAC WORKSHOP TO HOST CANDIDATES FOR OFFICE The Pennsylvania Medical Political Action Committee has scheduled its annual workshop for May 27 and 28, 1970, at Holiday Inn Town, Harrisburg. Among the speakers and guests will be candidates for state office from both parties and a number of elected officials. Governor Raymond P. Shafer is scheduled to give the welcome. William B. West, M.D., PaMPAC chairman, and George W. Shaffer, M.D., vice-chairman, will share the duty of presiding at the sessions. Speaker at the dinner on May 27 will be David Broder, political analyst for the Washington Post. Senators Hugh Scott and Richard S. Schweiker and a number of members of the state legislature are expected to be guests at a pre-dinner reception.

GROUP LIFE INSURANCE AVAILABLE TO PMS MEMBERS After a thorough study of proposals by eleven companies, the PMS Board of Trustees has endorsed a life insurance program underwritten by the Travelers Life Insurance Co. It is available to active members of the Pennsylvania Medical Society. The program provides term insurance protection with waiver of premium in case of total disability and double indemnity provisions at very attractive rates. (A 44-year old physician member may obtain a $50,000 policy for a $228.50 annual premium.) The policies are individually owned by the insured, guaranteed renewable annually to age 70, and may not be terminated by Travelers except for non-payment of premium. Further details will be presented by the State Society through a mailing to the membership in April.

CONGRESS ACTS AT LAST ON HEW, LABOR BUDGETS Congress finally has passed an appropriation bill acceptable to President Nixon for the HEW and Labor Departments. The measure provides funds for operating the departments in fiscal 1970, which began July 1, 1969. The departments have been operating under stop-gap Congressional resolutions until a compromise was reached. This second bill totaled $19.4 billion, $680 million more than requested by the president, but he accepted the compromise when Congress added a provision authorizing him to withhold 2 per cent of the funds. In the second bill, Hill-Burton funds are cut to $176 million from $258 million; the appropriation for health facilities, educational research and libraries was cut from $149 million to $126 million. Other cuts included $6 million from air pollution control; $6.3 from construction of community mental health centers; $6.3 million from mental health programs; $8.7 million from the National Institute of Arthritis and Metabolic Diseases; $5.7 million from the National Institute of Neurological Diseases and Stroke and $10.3 million from the National Institute of General Medical Sciences.

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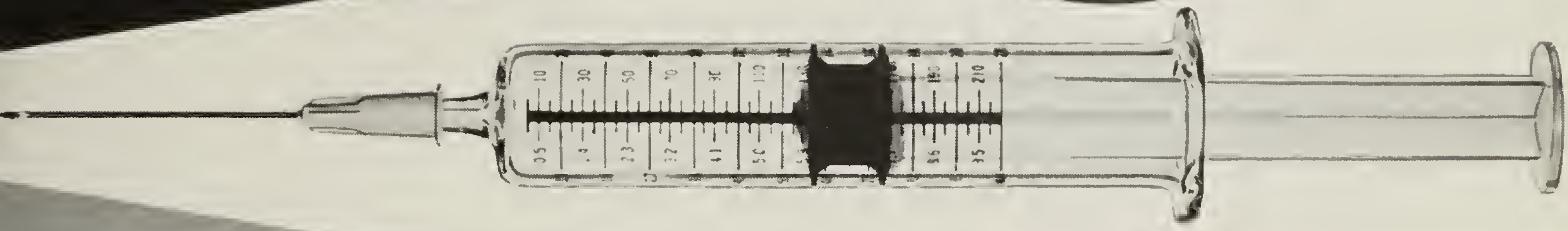

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o guard susceptible patients against intestinal monilial overrowth during broad-spectrum therapy—the protection of ystatin is combined with demethylchlortetracycline in ECLOSTATIN.

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ontraindication: History of hypersensitivity to demethylchlortetracyline or nystatin.

arning: In renal impairment, usual doses may lead to excessive accumlation and liver toxicity. Under such conditions, lower than usual doses re indicated, and, if therapy is prolonged, serum level determinations ay be advisable. A photodynamic reaction to natural or artificial sunght has been observed. Small amounts of drug and short exposure may roduce an exaggerated sunburn reaction which may range from eryema to severe skin manifestations. In a smaller proportion, photollergic reactions have been reported. Patients should avoid direct xposure to sunlight and discontinue drug at the first evidence of skin iscomfort. Necessary subsequent courses of treatment with tetracyines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity: onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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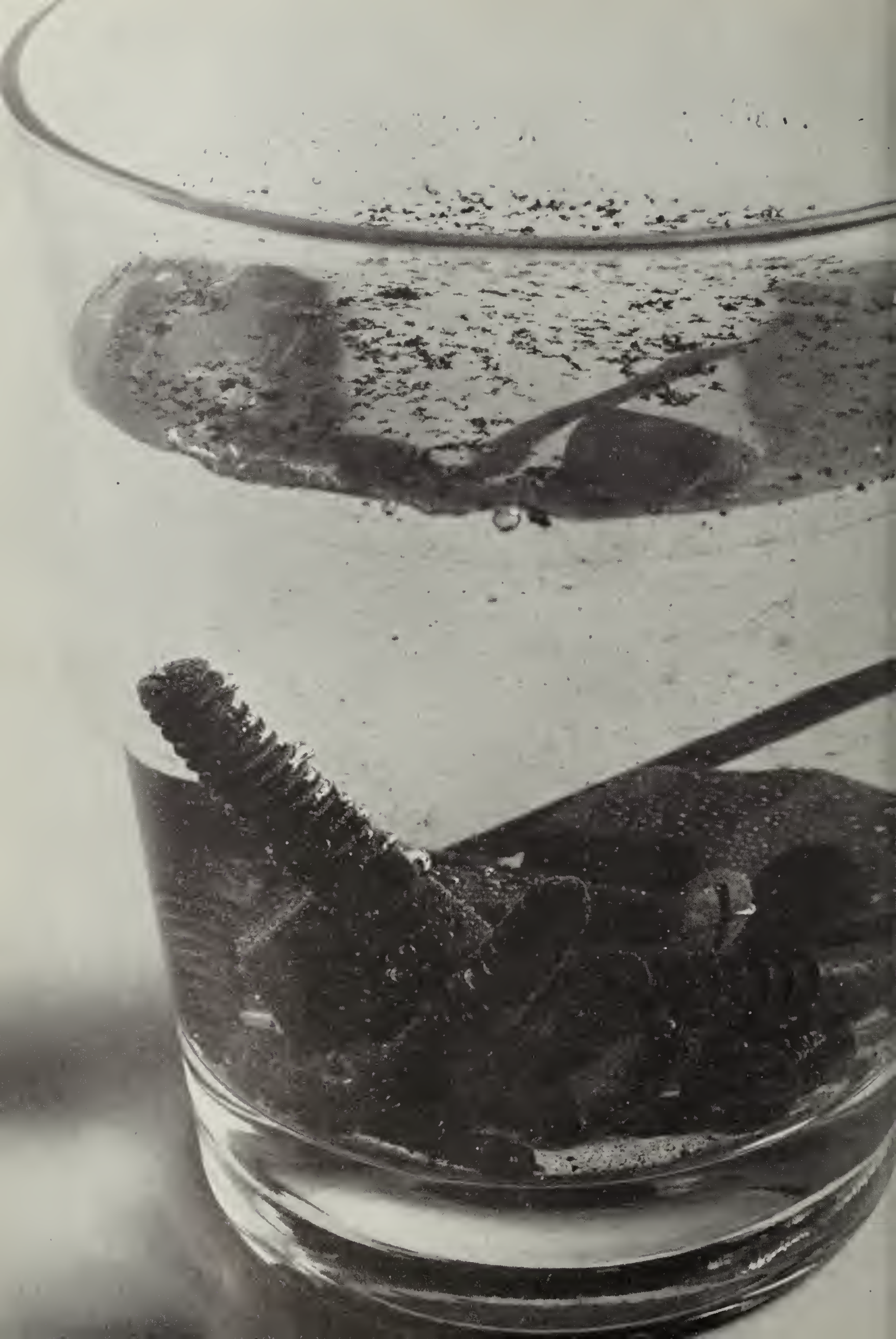

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Iodo-Niacin® Each Slosol® coated tablet contains potassium iodide 135 mg. and niacinamide hydroiodide 25 mg.

RESPIRATORY DISEASE: The use of Iodo-Niacin is indicated whenever an expectorant action is desired to increase the flow of bronchial secretion and thin out tenacious mucus as seen in bronchial asthma, and other chronic pulmonary disease. Iodo-Niacin has also proven of value in sinusitis, bronchitis, bronchiectasis, and other chronic and acute respiratory diseases where the expectorant action of iodide is desired.

RATIONALE: The signs and symptoms of pellagra, bromism, and iodism are similar in many respects and have been postulated by some investigators to be caused by the same mechanism: poisoning of coenzymes I and II. These enzymes are vital to cellular oxidative metabolism and are essential in the Krebs' cycle. Nicotinic acid is specific for the therapy of pellagra. Its use in the prevention or treatment of iodism follows from the above postulation: a source of replenishment of the pyridine ring structure in coenzymes I and II.

DOSAGE: THE ORAL DOSE FOR ADULTS IS TWO TABLETS AFTER MEALS TAKEN WITH A GLASS OF WATER. For children over eight years, one tablet after meals with water. The dosage should be individualized according to the needs of the patient on long-term therapy.

SIDE EFFECTS: Serious adverse side effects from the use of Iodo-Niacin are rare. Mild symptoms of iodism such as metallic taste, skin rash, mucous membrane ulceration, salivary gland swelling, and gastric distress have occurred occasionally. These generally subside promptly when the drug is discontinued. Pulmonary tuberculosis is considered a contraindication to the use of iodides by some authorities, and the drug should be used with caution in such cases. Rare cases of goiter with hypothyroidism have been reported in adults who had taken iodides over a prolonged period of time, and in newborn infants whose mothers had taken iodides for prolonged periods. The signs and symptoms regressed spontaneously after iodides were discontinued.

CAUTION: The causal relationship and exact mechanism of action of iodides of this phenomenon are unknown. Appropriate precautions should be followed in pregnancy and in individuals receiving Iodo-Niacin for prolonged periods.

SUPPLIED: Bottles of 100, 500 and 1,000 Slosol coated pink tablets.

REFERENCES: 1. Modell, W., ed., *Drugs of Choice*, 1968-1969, pg. 435. 2. Carryer, H. M., and Henderson, L. L.: *Postgrad. Med., 41*:612, 1967. 3. Wells. Jr., R. E.: *M. Clin. North America, 44*:5, 1960. 4. Richerson, H. B.: *Hospital Formulary Management*, (Sept.) 1967. 5. Stern, F. H:. *Psychosomatics*, Aug. 15, 1968. 6. Abrahamson, Jr., I. A., *et al.*: *E.E.N.T. Dig.*, July, 1968.

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PENNSYLVANIA MEDICINE newsfronts

Mr. Albright

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Dr. Howard

Officers Conference Program Set

Panels to Discuss Finance, Delivery of Medical Care

Medicine in the 1970's—how it should be financed and how it should be delivered—will be the theme of this year's high-level meeting of state and county medical society officials at the annual Pennsylvania Medical Society Officers' Conference, April 22 and 23, 1970, at the Penn Harris Motor Inn, Camp Hill.

A keynote address by PMS President William A. Barrett, M.D., Allegheny County, will precede Wednesday's opening session on the financing of health care to be discussed by a panel including Charles A. Bikle, M.D., Chambersburg, member of the PMS Officers Conference Committee, Isadore S. Falk, Ph.D., professor emeritus of public health, Yale University, and consultant on health services, United Steelworkers of America; Robert A. Albright, vice-president, United States Steel Corporation and Carnegie Pension Fund, and Russell B. Roth, M.D., Erie, speaker of the AMA House of Delegates.

Evening activities on opening day's session will be highlighted by the appearance of Charles Edwards, M.D., commissioner, Food and Drug Administration, who will address a dinner gathering of the Officers' Conference guests.

David W. Kline, M.D., Greenville, member of the Officers Conference Committee will moderate the second day's session on the delivery of health care. His discussion panel will include George Himler, M.D., New York City, chairman of the AMA Committee on Planning and Development and author of the widely discussed Himler Report; D. Robert Howard, M.D., director of the physician's assistant program, Duke University, Durham, N.C., and Mr. Irving J. Lewis, deputy administrator of HEW's Health Service and Mental Health Administration.

Park M. Horton, M.D., New Milford, chairman of the PMS Board of Trustees and Councilors, will preside at the Thursday luncheon meeting which will include the presentation of the annual PaMPAC Scholarship Awards and the AMA-ERF contributions to medical school deans in Pennsylvania.

Valentine R. Manning, M.D., Philadelphia, chairman of the PMS Officers Conference Committee, will preside over the entire 1970 session.

Further program details will be sent directly to county medical societies, each of which is invited to send four persons at State Society expense. However, any member of the PMS may attend at his or her own expense which will include a minimal registration fee to cover meals. Advance registration cards are available from the State Society.

Dr. Falk

Dr. Himler

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Preliminary Call to the 1970 Annual Session of the House of Delegates

The 1970 Annual Session of the House of Delegates of the Pennsylvania Medical Society will be called to order in the Baroque Ballroom of the Host Farm Motel, Lancaster, Pennsylvania, at 7:30 P.M., Monday, October 5, 1970. Subsequent meetings of the House of Delegates are scheduled for 9:00 A.M., Wednesday, October 7, and 9:00 A.M., Thursday, October 8.

All proposed amendments to the Constitution must be submitted to the office of the Secretary of this Society on or before June 5, 1970. Such amendments may be proposed upon the written petition of fifteen Active Members or Senior Active Members of the Society, or by the Committee on Constitution and By-laws.

Raymond C. Grandon, M.D.
Secretary

2,000 Take First Family Physician Exam

Two thousand family doctors took a written examination February 28 and March 1 to qualify as specialists in family practice, a new medical specialty emphasizing comprehensive, continuing care of the family.

The two-day examination was offered simultaneously at thirty-six academic centers throughout the United States under the aegis of the American Board of Family Practice. The test was devised with the cooperation of the National Board of Medical Examiners. It is being administered at the thirty-six local centers by Science Research Associates of Chicago.

The examination marks a milestone in American medical history, bringing medical education almost full circle. Before World War II most doctors were general practitioners and patient-care oriented. Since the war, emphasis has been on specialization to the extent that less than 15 per cent of medical school graduates enter family or general practice today.

The advent of the new broad-scale specialty, approved just a year ago by the American Medical Association and the Advisory Board for Medical Specialties, now offers the family doctor-to-be specialty status and the confidence of full-scale residency training. It offers the public the promise that more young doctors will begin to enter primary care as a career. With more primary doctors available, entry into the complex health care system can become easier and less expensive for all citizens.

The doctors who took the examination are veteran family physicians who have called themselves variously family doctors, family practitioners, general practitioners, generalists. Each has been in practice at least six years, or has been a medical school teacher at least six years, or has had a residency in a special field but still chose to enter family practice. Most are members of the American Academy of General Practice, the national association of family doctors.

The AAGP, second largest of medicine's organized groups next to the all-doctor AMA, is the only national medical organization that requires its members to take postgraduate study. Members must complete at least 150 hours of approved study during the 3-year tenure of membership. One of the qualifications for taking the examination this weekend is proof of satisfactory completion of at least 300 hours of approved study.

They will not only have proved their ability in the field of comprehensive, continuing care of the family, but also will have agreed to recertification after six years. No other specialty requires its diplomates to prove their competence on a continuing basis.

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Medical Education Studied At York

York Hospital is conducting a four-month seminar in medical education through May, 1970, to involve participants in a discussion of the history, forces and institutions which shape medical education in the United States.

The long range aim of the bi-weekly sessions is to provide the medical profession with a better ability to solve specific problems dealing with medical education in a community hospital setting.

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When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

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Delaware County Installs Officers

PMS President William A. Barrett, M.D., Pittsburgh, *is shown third from left above being greeted by the new officers of the Delaware County Medical Society at the annual installation dinner. With Dr. Barrett are, left to right: John A. Wigton, M.D., president-elect; Conrad A. Etzel, M.D., president; Dr. Barrett; Otto F. Muller, M.D., vice-president; Philip J. Esgro, M.D., treasurer; and Hunter S. Neal, M.D., secretary.*

Cooperation Sought

Medical Moonlighting Hit By State Licensure Board

The practice of "medical moonlighting" by personnel not licensed and registered as physicians in Pennsylvania has again become very commonplace, according to the State Board of Medical Education and Licensure, and the board is directing its efforts to eradicate it.

The trainee certificate or letter of registration issued to qualified physicians (either out-of-state Americans or foreign visitors in the cultural exchange) grants clinical privileges which relate to the approved supervised training program within the hospital complex to which the trainee is indentured, according to the board, and no other clinical privileges.

From those who have thus far been apprehended for medical moonlighting, the board learned that the practice has been continued because of monetary inducement, none of the parties claimed even a modicum of supervised clinical acumen, they all sought the employment, the hospitals involved solicited their services, all confessed that "everybody's doing it" and all conceded that they were really "medical baby sitters on the night watch."

The Board of Medical Education and Licensure, in its obligation to review the personnel of hospitals with reference to the improper employment of clinical clerks and trainees and to institute punitive action when convictions of wrong doing are made, seeks the assistance of all individuals and institutions in helping to put an end to this type of improper clinical practice through less painful procedures.

Hospital Teams to be Trained In Heart Revival

Heart stoppage need not mean death! A program to train hospital teams in the techniques of reviving persons whose hearts have stopped has been developed by the Pennsylvania Heart Association and the Western Pennsylvania Regional Medical Program with the cooperation of the department of anesthesiology, University of Pittsburgh School of Medicine.

Funded by an $88,000 grant from the division of regional medical programs, health services and mental health administration, of the Department of Health, Education, and Welfare, this program will attempt, within two years, to provide hospitals in western Pennsylvania with sufficient personnel trained in cardiopulmonary resuscitation to maintain twenty-four-hour emergency service.

"Approximately 750,000 deaths a year are due to conditions that are sometimes reversible by resuscitation," said Bulent Kirimli, M.D., co-director of the project and associate professor of anesthesiology at the University of Pittsburgh School of Medicine. "It is estimated that approximately 10 per cent of those dying in hospitals from cardiac arrest resulting from heart attacks could be saved by efficient resuscitation teams."

It is the goal of this project to provide initial CPR training to a corps of professional health personnel and to maintain and reinforce their skills by periodic retraining. To achieve a more rapid distribution of this skill throughout western Pennsylvania, trainees attending classes under this program will be taught in addition to the basic skills of cardiopulmonary resuscitation, methods and techniques for instructing members of their respective hospital staffs. This approach of training effective hospital teams instead of individuals is unique in the nation.

All hospitals in western Pennsylvania are eligible to participate in the training program at no cost.

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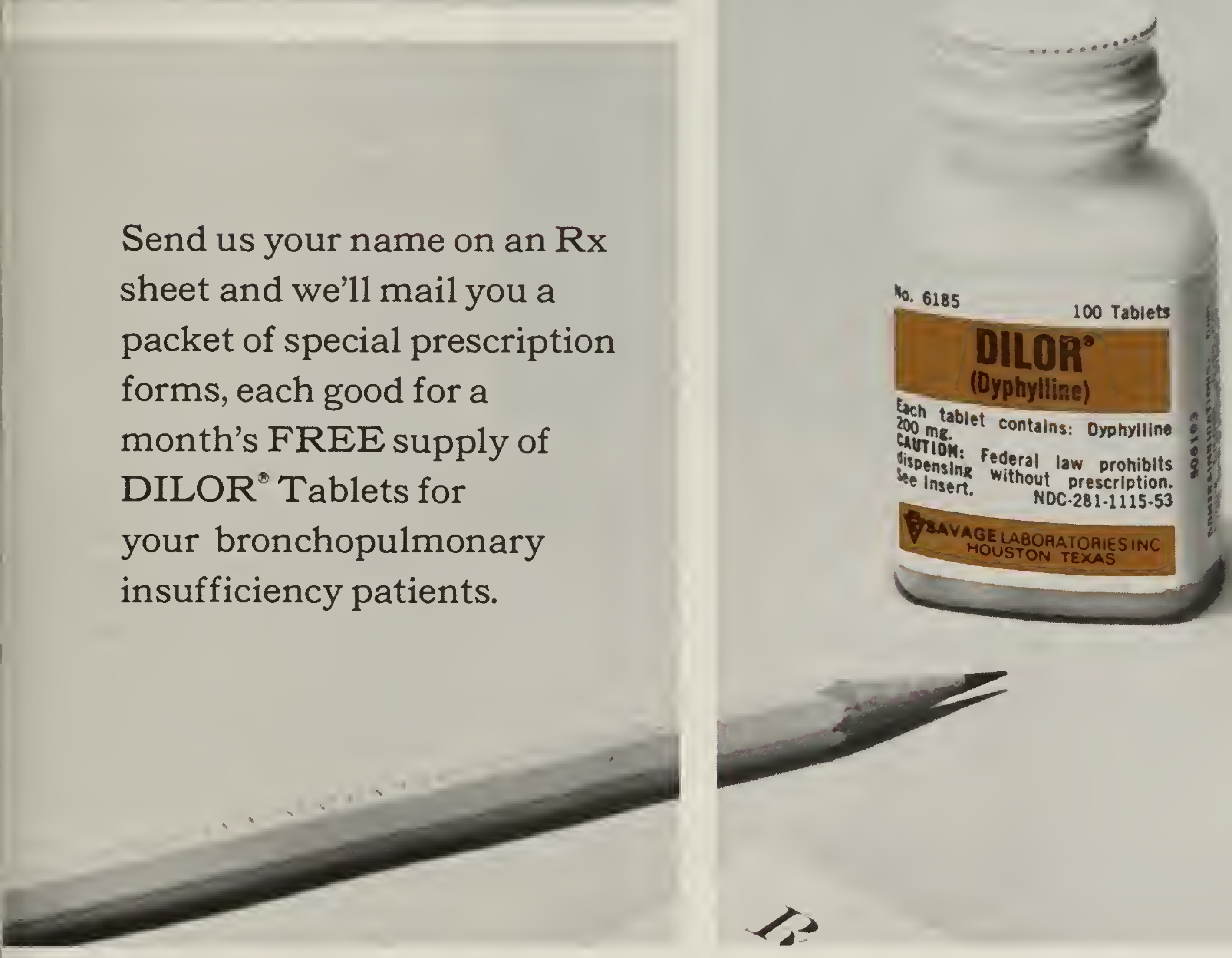
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PMS Hosts County Meeting

The tenth annual Past Presidents Dinner *of the Dauphin County Medical Society was held in the Commons Room of PMS Headquarters, Lemoyne, on February 3. Seventeen past presidents attended including, seated left to right, Drs. Fred B. Hooper, 1959; George R. Moffitt, 1968; David A. Smith, 1970 president; R. Edward Steele, 1969; G. Winfield Yarnall, 1963; and Hamblen C. Eaton, 1957. Standing left to right are Drs. Richard J. Miller, 1943; Howard E. Milliken, 1938; Russell E. Allyn, 1961; Wilson C. Everhart, 1967; John C. Foster, 1954; Champe C. Pool, 1964; William Tyler Douglass, Jr., 1953; Robert P. Dutlinger, 1965; George L. Gleeson, 1960; and John Bieri, 1962. Also attending but not shown in the photo were Drs. Lloyd Persun, 1955; J. Coller Bolton, 1951 and Mr. William B. Harlan, executive secretary of the society. Following the meeting, the Dauphin County Medical Society held its regular meeting at which Dr. Smith presided.*

Comprehensive Cancer Report Released by Pa. Health Dept.

A detailed review of the incidence, prevalence, natural history and various factors related to cancer of the female organs has been released by the Pennsylvania Department of Health. The report also includes a comprehensive survey of relevant cancer mortality figures from Pennsylvania residents for 1950, 1960 and 1965.

The review, compiled by George K. Tokuhata and Edward Digon, of the department's division of research and biostatistics, is concerned with four different cancer sites, breast, ovary, cervix and the corpus uteri.

According to the report, the highest relative rise in mortality rindug the past twenty years has been shown in ovarian cancer, which can develop even as early as puberty. The survivorship rate for this type of cancer, it was noted, is extremely low. Patients with this malignancy have only a 25 to 30 per cent chance of surviving five years or more after diagnosis.

Breast cancer was shown to be by far the most common type of the four cancer forms. This malignancy, which has been rising slowly in mortality rate (particularly in relatively young women), has the highest rate of survival. When the disease is localized and diagnosed early, 83 per cent can live five years or more.

A decline was clearly shown in cervical cancer in recent years. It was further noted that, with early detection and treatment when the disease is still localized, 80 per cent of those affected can survive five years or more.

The mortality rate for cancer of the corpus has been slowly rising in recent years, but cancer of the cervix occurs much more frequently of the two uterine cancers.

Breast cancer, it was shown, occurs more frequently among white, single women or women with few children, while cancer of the cervix uteri most commonly affects non-white, married women and women with many children. Certain similarities were noted in the occurrence of three of the malignancies studied, cancer of the ovary, corpus uteri and breast.

Pennsylvania statistics indicated that in 1965, there were thirty-one deaths per 100,000 women from breast cancer, with ten deaths per 100,000 from cancer of the ovary. Cancer of the cervix and corpus uteri had eight and two deaths per 100,000 respectively.

The figures further indicated that the breast cancer mortality rate was highest in counties with higher income and more education while cervical cancer was higher in counties with lower income and less education. These results agree with observations made in the earlier review contained in this report.

Distinct differences were noted between particular counties and regions. For example, the mortality rate for ovarian cancer, alone, ranged from 5.1 to 13.9 deaths per 100,000 women among large counties of 50,000 or more persons as of 1960.

This report, a comprehensive summary of existing knowledge of these malignancies, will be a valuable guide to physicians and others involved in development of cures and treatment of these diseases, the department noted. The department also said that the mortality characteristics as they exist in Pennsylvania would be of particular assistance to public health administrators and physicians in this state.

This information appears in a January, 1970, report, "Cancer of the Female Organs—Epidemiologic Review and Mortality Experience in Pennsylvania," published by the State Department of Health.

Lehigh Cites PMS President-Elect

PMS President-Elect William A. Limburger, M.D., West Chester, was recipient recently of a distinguished and surprising award from the Lehigh Valley Medical Society, which he served as Second District Trustee and Councilor for nine years.

Invited to present the PMS Fifty-Year Awards to James R. V. Heller, M.D., of Coplay, and Ralph F. Merkle, M.D., Allentown, Dr. Limburger in turn was presented a plaque by William F. Boucher, M.D., newly-installed president of the Lehigh Valley Medical Society. The plaque reads as follows: "This Award is presented to William A. Limburger, M.D., of West Chester, Pa., by the Lehigh Valley Medical Society, in recognition of his outstanding efforts and devotion to the medical profession as Trustee and Councilor, Second Councilor District of the Pennsylvania Medical Society. The Lehigh Valley Medical Society is deeply appreciative of his excellent cooperation, advice and counciling; and of the unselfish devotion of his time and energy in our interest during his tenure of office from 1961 through 1969, as our Trustee and Councilor."

The plaque bore the signatures of Dr. Boucher and Secretary Frank J. DiLeo, M.D., representing the Lehigh Valley Medical Society.

Other officers of the society installed at the combined business and dinner meeting were: Henry H. Fetterman, M.D., vice-president and Robert E. Shoemaker, M.D., treasurer. Past-President E. John Stahler, M.D., received the Lehigh Valley Medical Society's President's plaque as he retired from the presidency.

PMS, Bar Assn. Discuss Malpractice

The PMS Commission on Forensic Medicine, chaired by James Smith, M.D., Carlisle (head of table), meets with the Committee on Medical/Legal Medicine of the Pennsylvania Bar Association to discuss the increasing concern that the society has over the matter of medical malpractice. Both groups agreed that a better understanding must be reached during more frequent future meetings on matters of providing information to lawyers and courts, on the ethics of each profession and on means to reduce the number of malpractice cases going to court.

Mental Health Training for LPN's

A program under which licensed practical nurses employed at state mental institutions will receive specialized training in the care and treatment of the mentally disabled, has been announced by Secretary of Public Welfare Stanley A. Miller.

Secretary Miller said the program is designed to broaden the educational preparation of the licensed practical nurse, and will assist with efforts being made to recruit and retain qualified staff needed to provide adequate patient care.

Miss Agnes McKinney, consultant, nursing services and education in the department's office of mental health, explained that the in-service educational program will prepare licensed practical nurses to assume greater responsibilities in the expanding and developing field of mental health and is part of the department's continuing efforts to improve patient care services.

The new program will stress development of a better understanding of the needs of the mentally disabled and their families as well as a broader understanding of the hospital, county, state and federal resources for the prevention and treatment of mental disabilities. The LPN's participative role in therapeutic nursing care of individual patients also will be emphasized, Miss McKinney said.

AMA-SAMA Liaison Strengthened With New Staff Official

Liaison between the Student American Medical Association and the American Medical Association staff will be the responsibility of the editor of *American Medical News*, Marvin L. Rowlands.

The appointment was made by Ernest B. Howard, M.D., executive vice president of the AMA.

"I have asked that greater emphasis be placed on liaison between SAMA and the AMA staff, Dr. Howard said. "Marvin Rowlands has been directed to coordinate efforts of the AMA staff to provide every possible assistance which SAMA members and staff request."

Doctor Howard emphasized that the AMA staff recognizes the autonomy of SAMA, but said that the AMA can offer many supporting services to assist the medical students' organization.

"Medical Economics" Special Features Drug Abuse Report

The first supplementary issue of *Medical Economics* magazine in forty-seven years of publishing will be devoted this month to an in-depth report on the drug abuse epidemic and what can be done about it, according to Charles P. Daly, publisher.

"The problem of drug abuse has become so acute at all levels of our society that we felt an obligation to utilize our staff and our sources to give the physician a current, authoritative review," said Mr. Day.

The editorial material is expected to provide an up-to-date evaluation and analysis of the drug abuse problem, a current review of methods of dealing with it, and information to help the physician become more effective in handling drug abuse cases.

Reprints of each article in the special issue, to be published April 20, will be available in quantities of 100 or more at bulk rates from Medical Economics, Inc., Litton Publications, Inc., Oradell, N.J. 07649.

Travelers Advised on Yellow Fever

Travelers bound for the northern half of South America or the middle third of Africa require Yellow Fever vaccinations which must be given at centers designated by the U.S. Public Health Service.

There are seven such centers in Pennsylvania: the Erie County Department of Health; Temple University Hospital, Hospital of the University of Pennsylvania, and the U.S. Public Health Service Outpatient Clinic, all in Philadelphia; the U.S. Public Health Service Outpatient Clinic in Pittsburgh; the Ritenour Health Center at Pennsylvania State University, State College; and the American Baptist Convention Medical Department at Valley Forge.

The Yellow Fever certificate does not become valid until ten days after primary immunization and failure to allow for this interval may result in travel delay. The U.S. Public Health Service recommends that a period of one month be allowed between inoculations with live virus vaccines since administration of two or more live virus vaccines at an interval of less than that may cause interference and lessened protection.

"Case in Point"

Malpractice Film Offered to M.D.'s

Wyeth Laboratories has produced a new motion picture, "Case in Point," to dramatize the do's and dont's for the medical assistant while receiving and caring for patients in her physician-employer's office.

Designed primarily to avoid malpractice suits, the film is subtitled "Medico-Legal Responsibilities of the Medical Assistant."

In enactments of the "right and wrong way," it deals with such problems as handling emergencies when the physician is away, medication errors, first-aid problems, missing and stolen prescription blanks, and confidential information.

The producers recommend the picture for both physicians and their staffs and suggest scheduling it for a "boss's night" program.

"Case in Point," which was premiered at the 1969 Annual Convention of the American Association of Medical Assistants, is 25 minutes, 16mm, sound and color, and available on free loan from Wyeth Film Library, Box 8299, Philadelphia, Pa. 19101.

New Deputy to Head Regional Health Function

State Secretary of Health, Ellsworth R. Browneller, M.D., has announced the appointment of George R. Carpenter, M.D., as deputy secretary for local health.

Dr. Carpenter, director of field services since 1968, will have overall responsibility for the Commonwealth's regional health functions with special emphasis on the delivery of health services by local health units.

A native of Winston-Salem, N.C., he holds an M.D. from the University of Virginia and an M.P.H. from Johns Hopkins.

Dr. Carpenter has had nine years of administrative experience with the department of health, he joined the department in 1961 as assistant director of field services and later was appointed director of that bureau in 1968.

As assistant director of field services, he provided administrative supervision to the regional medical directors and assisted in the preparation and review of various program plans for the state's health regions.

In the position of director, he assumed administrative charge of the 1,100 field personnel throughout the state who provide public health services for Commonwealth residents, and deal with all county and municipal health authorities.

Better Health Care Availability Sought

The Mellon Institute of Carnegie-Mellon University, Pittsburgh, in consultation with selected physicians in Allegheny County, has developed a Center for Western Pennsylvania Health Service Research and Development.

The center is the first of a statewide network of similar organizations and is exploring, with the PMS Council on Education and Science, closer cooperation among the health care, academic and industrial communities toward the goal of improving the efficiency and availability of health care in Western Pennsylvania.

York Hospital Tackles Patient Visitor Problems

York Hospital began a two-week pilot monitoring study program, in which the hospital will enforce its two-visitor per patient policy. The program will affect all patients not in specialized nursing care units.

This second pilot program has been established as a result of an eight-month study by the hospital's patient care committee which is examining hospital visitor behavior patterns and conducting test visitor programs. Statistics gathered from patient evaluation forms, direct patient interviews, questionnaires completed by the visiting public, hospital staff personnel and clergy, and a pilot visitor program held in October, 1969, all revealed that patients should be limited to two visitors at one time.

According to Clark Todd, assistant to the president, who is patient care committee chairman, the review of patient evaluation forms showed a significant number of complaints from the patients centered around the hospital's present visiting policy. He cited that patients themselves were unable to cope with visiting problems because they were at the mercy of anyone who walked into their room. "Not many patients chance offending a visitor by asking him to leave, even though they are physically uncomfortable or fatigued."

Nursing service and medical staff questionnaires revealed visitors affected the patient's recuperative ability and that visitors should be limited to two people due to small rooms and their adverse effect.

New HEW Periodical Lauded; Emergency Medicial Services Data Available To M.D.'s

The response to the first issue of a new HEW periodical, *Emergency Health Services Digest*, by a test group of physicians and other professionals has been so favorable that the publication has been released for distribution to all interested in emergency services.

Published by the Health Services and Mental Health Administration's Division of Emergency Health Services, the first issue contains summaries of fifty-seven articles selected from current professional literature. Each article deals with some aspect of planning, programming, training or delivery of emergency medical and health services.

Pilot distribution of the publication was made by the American Medical Association's committee on disaster medical care to physicians, hospitals, schools of medicine, health departments, civil defense offices and other agencies concerned with disaster preparedness. Their response emphasized the value of the *Digest* as a planning and research tool.

In addition to keeping those involved in emergency health care informed on pertinent current literature, *Digest* provides a key to selected sources material for planning and research efforts and furnishes supplementary reading for training courses and programs.

Subsequent issues of *Digest*, each with a cumulative index, are planned for semi-annual publication. Emergency Health Services Digest—No. 2, will be available early this year.

The *Digest* is available from the Public Information Office, Division of Emergency Health Services, 6935 Wisconsin Ave., Chevy Chase, Md. 20015, or from the U.S. Government Printing Office, Washington, D.C. 20402, at forty cents per copy.

"Health Leadership" is Theme For Auxiliary Mid-Year Confab

Elsworth R. Browneller, M.D., newly-appointed Pennsylvania Secretary of Health and Ethel J. Alpenfels, Ph.D., professor of anthropology at New York University, will be the honored guest speakers at the forthcoming Mid-Year Conference of the PMS Woman's Auxiliary, April 15–16, 1970, at the Penn Harris Motor Inn, Camp Hill.

The program of this year's gathering was planned on the theme: "Active Health Leadership in a Changing Culture," and will offer discussions on administration of finances and state funds, health activities in the community, parliamentary procedures and communications and priority projects in a changing culture.

Dr. Alpenfels will speak on "The Anthropologist Looks at Health in a Changing Culture" following dinner on the evening of the opening day's session. Professor of Educational Anthropology at N.Y.U., Dr. Alpenfels has been acclaimed "Woman of the Year," "Teacher of the Year," and elected an Honorary Member of the Internation Teaching Fraternity, Delta Kappa Gamma, the first person to receive the Alpha Delta Mankind Award in recognition for outstanding contributions to anthropology-sociology, education and the humanities.

Dr. Browneller brings to the auxiliary meeting a topic of most timely concern—"Bridging the Escape to Nowhere," a forum on drug abuse. His remarks will be supported by a thirty-four-minute color film entitled "Marihuana," and by an open discussion by former drug addicts who are residents of Gaudenzia House, Inc., Philadelphia.

PMS Scientific Seminar Set For November

"Clinical Therapeutics—1970" will be the theme of this year's PMS Scientific Assembly at the Host Farm Resort Motel, Lancaster, November 16–19. The annual gathering will also include seminars and workshop sessions for nurses and allied professions as well as a special exhibit—"Continuing Medical Education Learning Center"—featuring videotapes and Autotutor, a new, computerized, self-testing device.

PMS Official in Proclamation Signing

PMS Secretary Raymond C. Grandon, M.D., Harrisburg, seated left, looks on as Pennsylvania Governor Raymond P. Shafer, center, signs the proclamation declaring March 15 to 21 as Poison Prevention Week in the Commonwealth. Seated right is Mr. Charles Sellars, Erie, president of the Pennsylvania Pharmaceutical Association. Standing are, left to right, Mr. Maurice Blatman, executive Secretary of the Pennsylvania Pharmaceutical Association; Assistant Director Paul M. Wilcox of the Division of Drug Control, Pennsylvania Department of Health; Secretary Ellsworth R. Browneller, M.D., of the health department and Col. Paul. A. Rittelman, deputy secretary or drug control of the department of health.

AMA President Pledges Aid To Occupational Health, Safety

"More active implementation" of the American Medical Association's goals toward the improvements of occupational health and safety has been pledged by Gerald P. Dorman, M.D., president of the AMA.

The AMA's Department of Occupational Health is now in the process of preparing an educational campaign for physicians in occupational health in regions of the country particularly affected by the so-called "latent" respiratory diseases such as byssinosis, pneuoconiosis and asbestosis, and by pesticides in agricultural areas.

Henry Howe, M.D., secretary of the AMA'S Council on Occupational Health who testified before the Senate committtee on labor in support of the proposed Occupational Safety and Health Act (S. 2788), stated that the difficulty in researching the respiratory problems is that "the symptoms and the physical changes do not occur until ten to twenty years after exposure," and are initially often confused with symptoms similar to those of asthma and smoking.

Dr. Dorman and Senator Harrison A. Williams, Jr. (D-N.J.), chairman of the special subcommittee, agreed to encourage medical research in these problem areas and to persuade employers to install protective measures against such hazards. They also concurred that the AMA should take a lead in accomplishing these goals. In further testimony from the AMA, the subcommittee was assured "that the nation's physicians, and particularly the many thousands of them who conduct employee health programs, will cooperate in any program well designed to improve the safety and health of the American worker."

New Staff For Specialty Liaison

The American Medical Association has established a new headquarters staff department to strengthen liaison and services to related medical organizations.

Known as the Department of Specialty Society Services, it reports directly to Richard S. Wilbur, M.D., assistant executive vice president. The department director is Theodore R. Chilcoat, Jr., a five-year staff member formerly assigned to the AMA Washington office.

The department will serve and implement the directives of the interspecialty committee of the AMA which was created in 1966.

Commenting on the new appointments, Ernest B. Howard, M.D., AMA executive vice president, said, "The establishment of this special department is an important step in strengthening AMA'S relationship with the specialty societies, and it is the culmination of a long range program undertaken to upgrade the services of the AMA to the specialty societies."

In his past experiences, Mr. Chilcoat has provided AMA liaison with national specialty societies and served as assistant director of the AMA Department of Government Relations.

Enrollment Up For Med Schools

Enrollment in all U.S. first-year medical school classes rose to 10,229 places in 1969–70, increased by 420 places over 1968–69 and by 1,470 places over 1965–66.

Current estimates are that 11,950 students will be admitted to first-year classes in 1972. From 1968 to 1975, first-year classes are expected to increase by fifty per cent to 14,700 places. It should be noted that these projections were developed before the current slowdown in federal support for medical school activities.

Although part of the increase in additional places from 1965–66 to 1969–70 is due to the opening of thirteen medical schools, it also reflects an increase in entering classes in established schools. (from *Datagrams.*)

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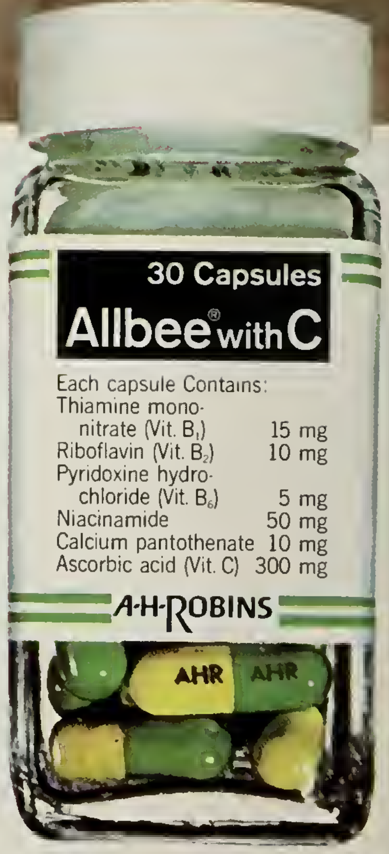

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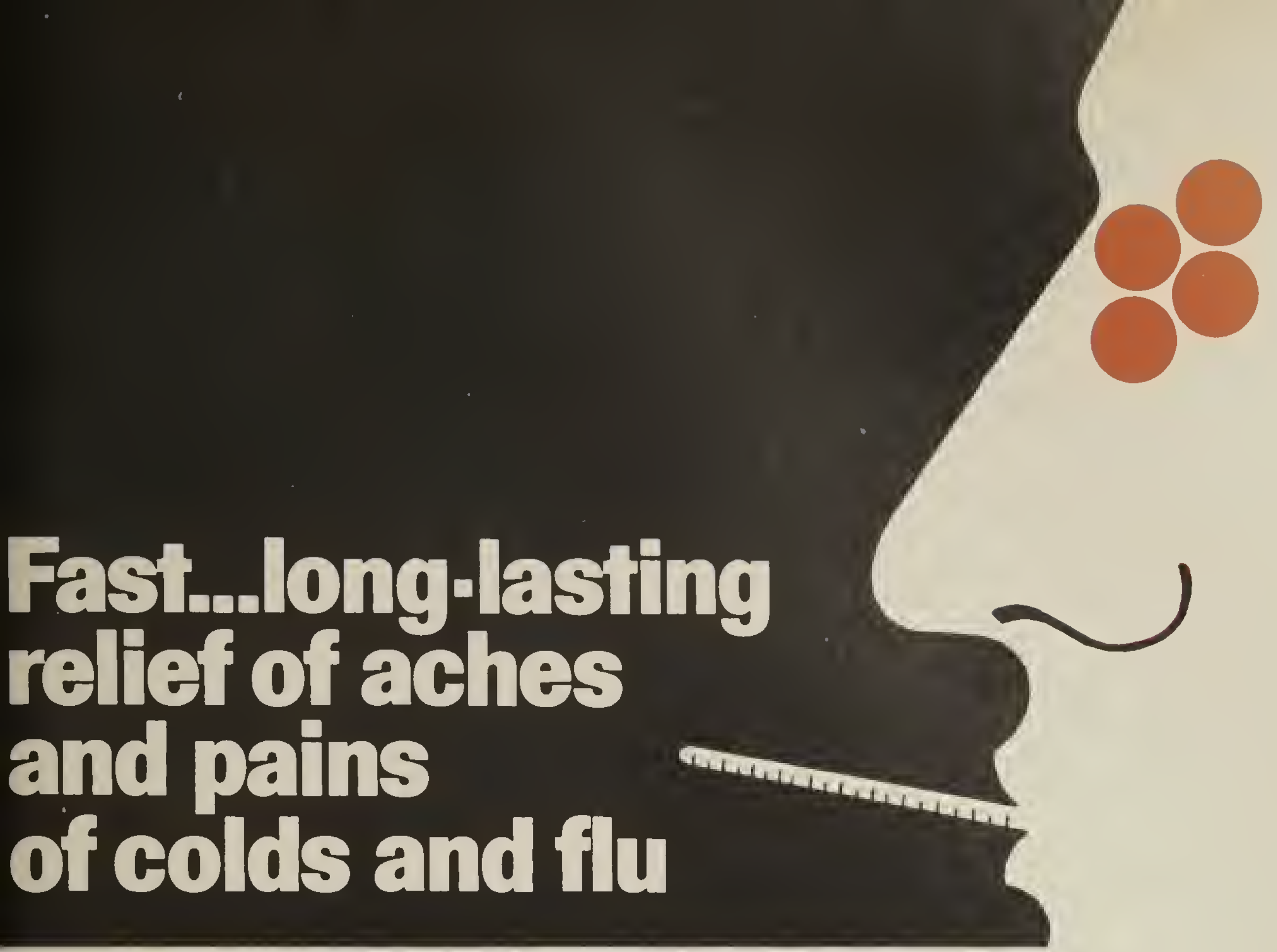

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25	4.52	4.47

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Composition: Each tablet contains potassium bicarbonate (2.5 Gm.), citric acid (2.1 Gm.), cyclamic acid, artificial flavor and color.
Contraindications: When renal function is impaired, or if the patient has Addison's disease, potassium supplementation should not ordinarily be instituted.
Precautions: Should not be used in patients with low urinary output unless under the supervision of a physician. In established hypokalemia, attention should be directed toward correction of frequently associated hypochloremic alkalosis and other potential electrolyte disturbances. Patients should be directed to dissolve tablet in stated amount of water to assure against gastrointestinal injury associated with the oral ingestion of concentrated potassium salt preparations.
Side Effects: While nausea has been reported in an occasional patient, K-Lyte produces no serious side effects when given in recommended doses to patients with normal renal function and urinary output. Potassium intoxication causes listlessness, mental confusion, tingling of the extremities and other symptoms associated with a high concentration of potassium in the serum.
Administration and Dosage: K-Lyte effervescent tablets must be dissolved in 3 to 4 ounces of water before taking. Adults: 1 tablet 2 to 4 times daily, depending on the requirements of the patient. Two tablets (50 mEq. of elemental potassium) supply the approximate normal adult daily requirement.
How Supplied: Effervescent tablets—boxes of 30 and 250 (orange or lime).

*Reports on file: Medical Research Department,
Mead Johnson Laboratories, Evansville, Indiana 47721

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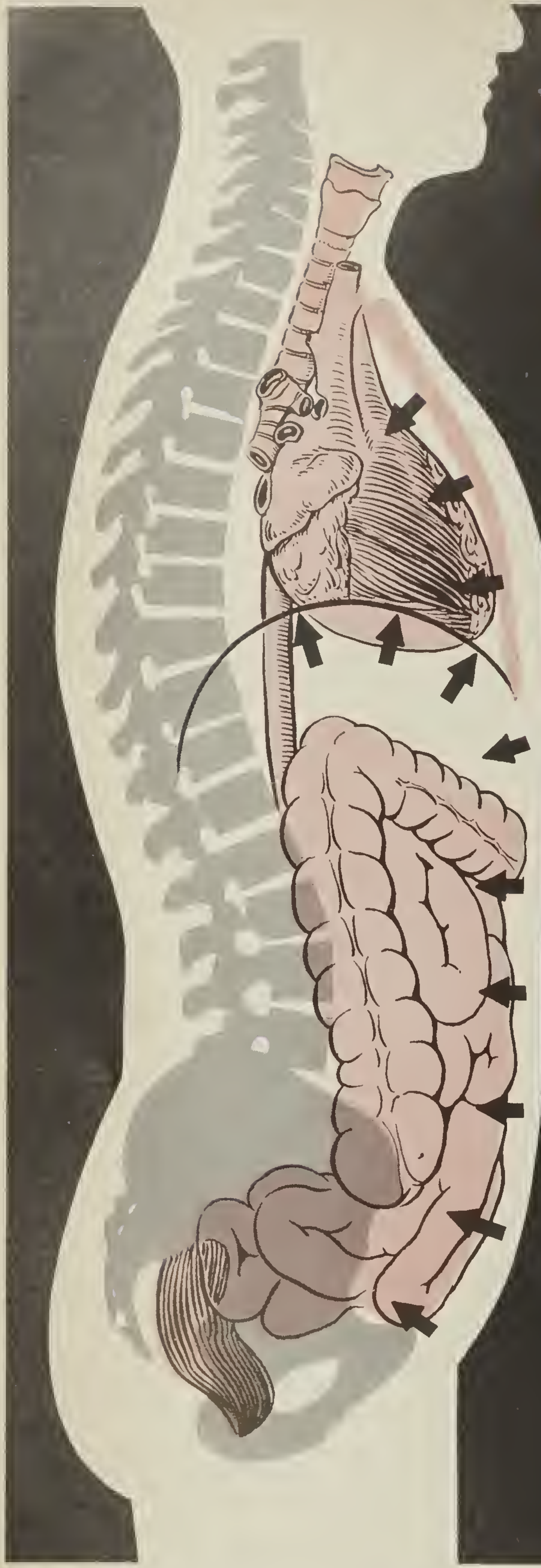

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...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*

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Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

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C-124

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IN EMPHYSEMA

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All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

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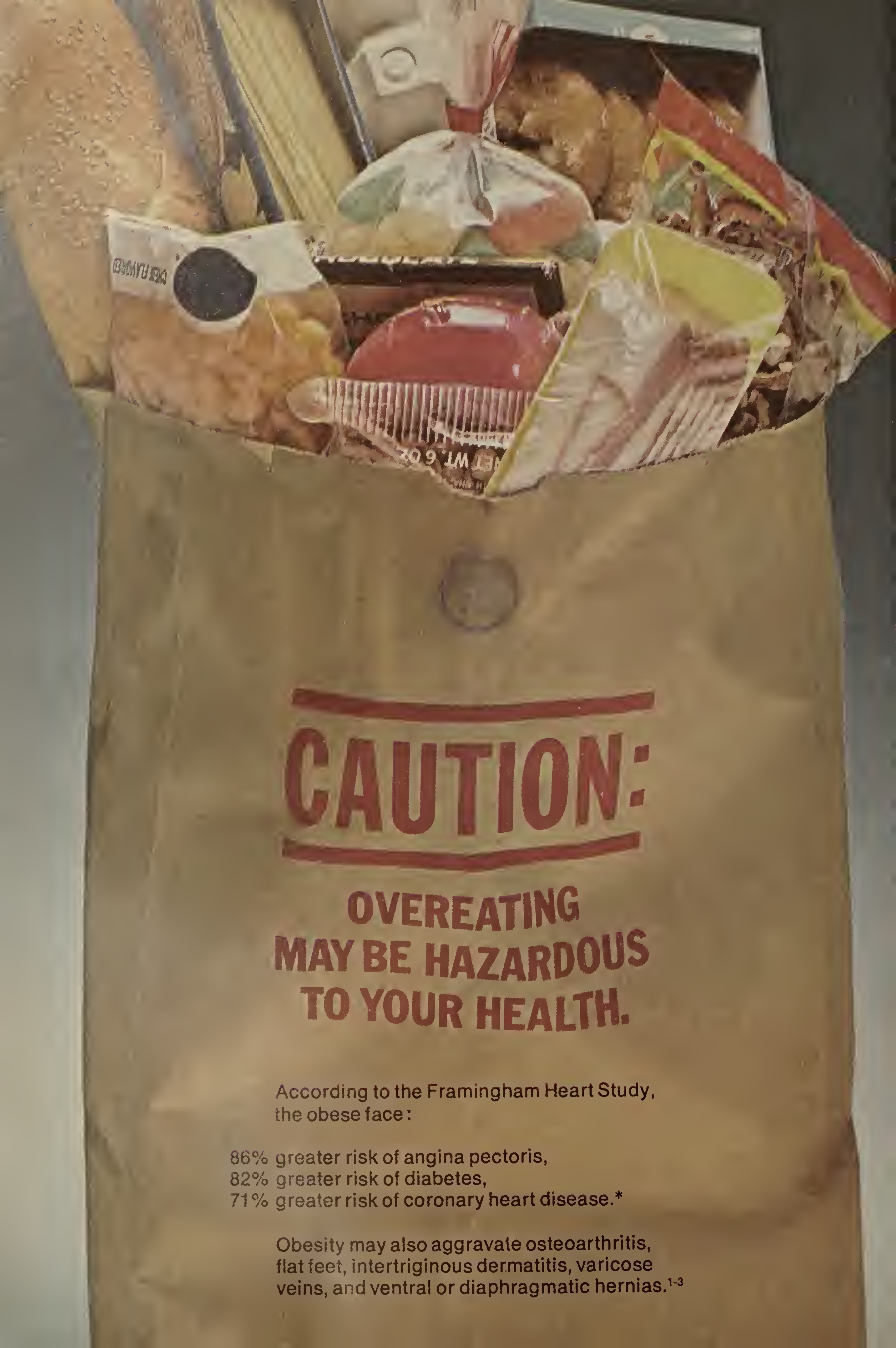

According to the Framingham Heart Study, the obese face:

86% greater risk of angina pectoris,
82% greater risk of diabetes,
71% greater risk of coronary heart disease.*

Obesity may also aggravate osteoarthritis, flat feet, intertriginous dermatitis, varicose veins, and ventral or diaphragmatic hernias.[1-3]

you are considering weight reduction, consider

Preludin®

phenmetrazine hydrochloride Endurets® prolonged-action tablets

Often effective

Controlled studies in a general patient population have shown that when Preludin is used with diet, the rate of weight loss exceeds that obtained by placebo and diet.

Long acting

Slow, even release of the active principle usually suppresses appetite continuously for about 12 hours.

Once-a-day dosage

One Endurets tablet after breakfast. It helps reduce weight and costs, conveniently.

For contraindications, warning, precautions, and adverse reactions, please see the full prescribing information.
It is summarized on this page.

Where there's no will there's a therapeutic way.

*Among persons 20% or more overweight as compared with median weight for persons of like height and sex.
1. Kannel, W.B., *et al.*: *Circulation* 35:734, 1967.
2. Thomas, H.E., Jr., *et al.*: *Med. Times* 95:1099, 1967.
3. Albrink, M.J., in: Beeson, P.B. & McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Phila.: W.B. Saunders Co., 1967.

Preludin®
phenmetrazine hydrochloride
Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).
Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.
Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.
Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.
Adverse Reactions: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache.
Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by midmorning.
Availability: Pink, square, scored tablets of 25 mg. for b.i.d. or t.i.d. administration, in bottles of 100 and 1000.
Pink, round Endurets® prolonged-action tablets of 75 mg. for once-a-day administration, in bottles of 100 and 1000.
(B)R3-46-560-B
For complete details, please see full prescribing information.

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PR-7169

PENNSYLVANIA
MEDICINE

close-up/MD's

The appointment of **David A. Dayton, M.D.,** as an associate in the department of medicine, section on renal disease, at the Geisinger Medical Center, has been announced by **Leonard F. Bush, M.D.,** chief of staff. Dr. Dayton has been specializing in nephrology at the Mayo Graduate School of Medicine since July 1967. He served as a resident in internal medicine at the Geisinger Medical Center from 1965 to 1967. He also interned at the center.

Karl H. Beyer, Jr., M.D., of Merck Sharp & Dohme Research Laboratories, West Point, prepared of one of seven articles on the pharmaceutical industry in a special issue of *Modern Medicine.* Appearing in the medical journal as a "Symposium on Pharmaceuticals from Test Tube to Patient," the articles present a comprehensive picture of the industry—its accomplishments, problems, plans and relationship with the medical profession. Dr. Beyer's subject was "From the Test Tube."

Charles A. Laubach, Jr., M.D., chief of the cardiovascular and pulmonary disease section, Geisinger Medical Center, and chairman of the SVRMP council on heart disease, is the new president-elect of the Pennsylvania Heart Association. Dr. Laubach, who also is active in the SVRMP's Northeastern Area Committee and serves as project co-director of the CCU nurses' training program at Geisinger, has been working at various levels of the PHA since 1956.

The physician-researcher instrumental in establishing the nation's first viable frozen skin bank has been named chief of plastic surgery at the Hospital of the University of Pennsylvania, Philadelphia. The appointment of **Herndon B. Lehr, M.D.,** as head of the division of plastic and reconstructive surgery has been announced by **Jonathan E. Rhoads, M.D.,** chairman of the department of surgery. **Alfred Gellhorn, M.D.,** dean and director of the University of Pennsylvania Medical Center, approved the appointment.

June F. Klinghoffer, M.D., Philadelphia has been appointed professor of medicine at Woman's Medical College of Pennsylvania. Her promotion from associate professor to professor was announced by **Glen R. Leymaster, M.D.,** WMC president. A WMC alumna, class of '45, Dr. Klinghoffer received the Christian R. and Mary F. Lindback award for distinguished teaching at WMC commencement exercises in June, 1965. The same year, her students dedicated their yearbook, *The Iatrian,* to their "Chief Champion."

J. Edward Lynch, M.D., has been appointed chairman of obstetrics and gynecology at the Mercy Catholic Medical Center, Philadelphia, it was announced by **Sister M. Michael, president. Dr. Arturo R. Hervada, M.D.,** of Drexel Hill has been named chairman of pediatrics, and **Ward D. O'Sullivan, M.D.,** former director of surgery at St. Francis Hospital, New York City, has been appointed chairman of surgery for the new Catholic Medical Center of Southeastern Pennsylvania.

John J. Newton, M.D., has been appointed to the medical staff at Wyeth Laboratories, reporting to **Robert J. Bower, M.D.,** assistant medical director and director of clinical investigation. In announcing this appointment, **Daniel L. Shaw, Jr., M.D.,** medical director, said that Doctor Newton will help organize and coordinate activities relating to clinical investigative studies.

Albert N. Brest, M.D., Philadelphia, has been appointed professor of medicine at Jefferson Medical College and head of the division of cardiology at Thomas Jefferson University Hospital. He was formerly head of the section on vascular diseases and renology, and head of the cardiology section at Hahnemann Medical College and Hospital. Dr. Brest is an internationally known authority on cardiovascular and renal diseases. Author of over two hundred scientific articles in his field, he is co-editor of several textbooks.

Hratch Kasparian, M.D., and **Leslie Wiener, M.D.,** have also joined the Jefferson staff as members of the division of cardiology headed by Dr. Brest. Dr. Kasparian is associate professor of medicine and director of the new cardiac catheterization laboratory of the hospital. Dr. Wiener has been appointed assistant professor of medicine at Jefferson Medical College and director of the coronary care unit at the hospital.

John J. Downes, Jr., M.D., senior anesthesiologist at The Children's Hospital of Philadelphia, spoke at the Los Angeles Children's Pediatric Anesthesia Conference in January. He discussed respiratory failure in infants and children. Dr. Downes is assistant professor of pediatric anesthesiology at the University of Pennsylvania School of Medicine.

C. Wayne Bardin, M.D., an endocrinologist whose research deals with both hormones and cancer, has been named associate professor of medicine in the College of Medicine at Milton S. Hershey Medical Center of Pennsylvania State University. He is currently senior investigator in the endocrinology branch of the National Cancer Institute in Bethesda Md.

Bruce W. Raffensberger, M.D., Fort Washington, has been appointed director of Obstetrics and Gynecology for a four-year term beginning January 1, 1970, at Chestnut Hill Hospital, Ambler. He has been on the active staff of the hospital since 1955 and has been a senior attending obstetrician-gynecologist for the past eight years.

the common denominator in G.U. therapy

In G. U. therapy, the first consideration is control of infection. To your patient, a primary concern is *relief from pain.* URISED provides rapid relief from pain, and relaxation of smooth muscle spasm through parasympatholytic action of atropine and hyoscyamine.

URISED is not a dramatic "wonder drug" but a useful one that has served the medical profession for more than fifty years. You can rely on URISED; it has gained the confidence of physicians who have written more than one million prescriptions for their patients.

URISED is a mild but reliable agent with a low order of toxicity. It can be used alone to treat uncomplicated urinary tract infections where the invading organisms are susceptible to methenamine and methylene blue in an acid medium. URISED can provide "interim therapy" while awaiting complete laboratory diagnosis. It can also be used as an adjunct (to relieve pain and spasm) with almost any other form of antibacterial therapy).

For prompt relief of the distressing symptoms of pain, burning, frequency, dysuria, and spasm, consider URISED. Your patient will recognize its presence by the characteristic blue-green urine.

keeping your patient comfortable

PRECAUTIONS: Administer with caution to persons with known idiosyncrasy to atropine or cardiac disease.

SIDE EFFECTS: Neither irritation nor other untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occur, decrease dosage. If rapid pulse, dizziness, or blurring of vision occur, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

CONTRAINDICATIONS: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

DOSAGE: Adults—Two tablets, orally, four times per day followed by liberal fluid intake. Acute cases—Initially two tablets every hour for three doses followed by the recommended daily administration. Children—One-half the adult dose.

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Hyoscyamine	0.03 mg.	Phenyl Salicylate	18.1 mg.
Methenamine	40.8 mg.	Benzoic Acid	4.5 mg.

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close-up/MD's

WELCOME, NEW MEMBERS!

These M.D.'s have joined the State Society in recent months:

LUZERNE COUNTY:

Robert R. Eidlemann, M.D., R. D. 1, Freeland 18224.

Stephen N. Martyak, M.D., 838 Washington St., Freelan 18224.

Hugh H. Mullin, Jr., M.D., 1320 E. Broad St., Hazleto 18201.

LYCOMING COUNTY:

Herbert Fellerman, M.D., 610 Wyoming Ave., Kingsto 18704.

Fred R. Amsler, Mr., M.D., 835 W. Fourth St., Williamspor 17701.

Oscar V. Fernandez, M.D., 1100 Grampian Blvd., Williamsport 17701.

Gordon A. Youngberg, M.D., 625 N. Montour St., Montoursville 17754.

MERCER COUNTY:

Arthur W. Curtis, Jr., M.D., 912 E. State St., Sharon 16146.

MONROE COUNTY:

Peter Haynicz, M.D., Monroe County General Hospital East Stroudsburg 18301.

MONTGOMERY COUNTY:

Joseph F. Norato, M.D., 888 Glenbrook Ave., Bryn Maw 19010.

Reuben C. Balinao, M.D., 7 Gwynned Greene, N. Wale 19454.

Lilia D. Mena, M.D., 1724 Sterigere St., Norristown 19401.

NORTHAMPTON COUNTY:

Donald B. Malkoff, M.D., 800 Ostrum St., Bethlehem 18015.

Thomas L. Gaydos, M.D., 800 Ostrum St., Bethlehem 18015.

Thomas J. Tachovsky, M.D., 65 E. Elizabeth Ave., Bethlehem 18018.

Jan B. Wemple, M.D., 800 Ostrum St., Bethlehem 18015.

WESTMORELAND COUNTY:

John R. Cope, M.D., Apt. 105, New Market Dr., Greensburg 15601.

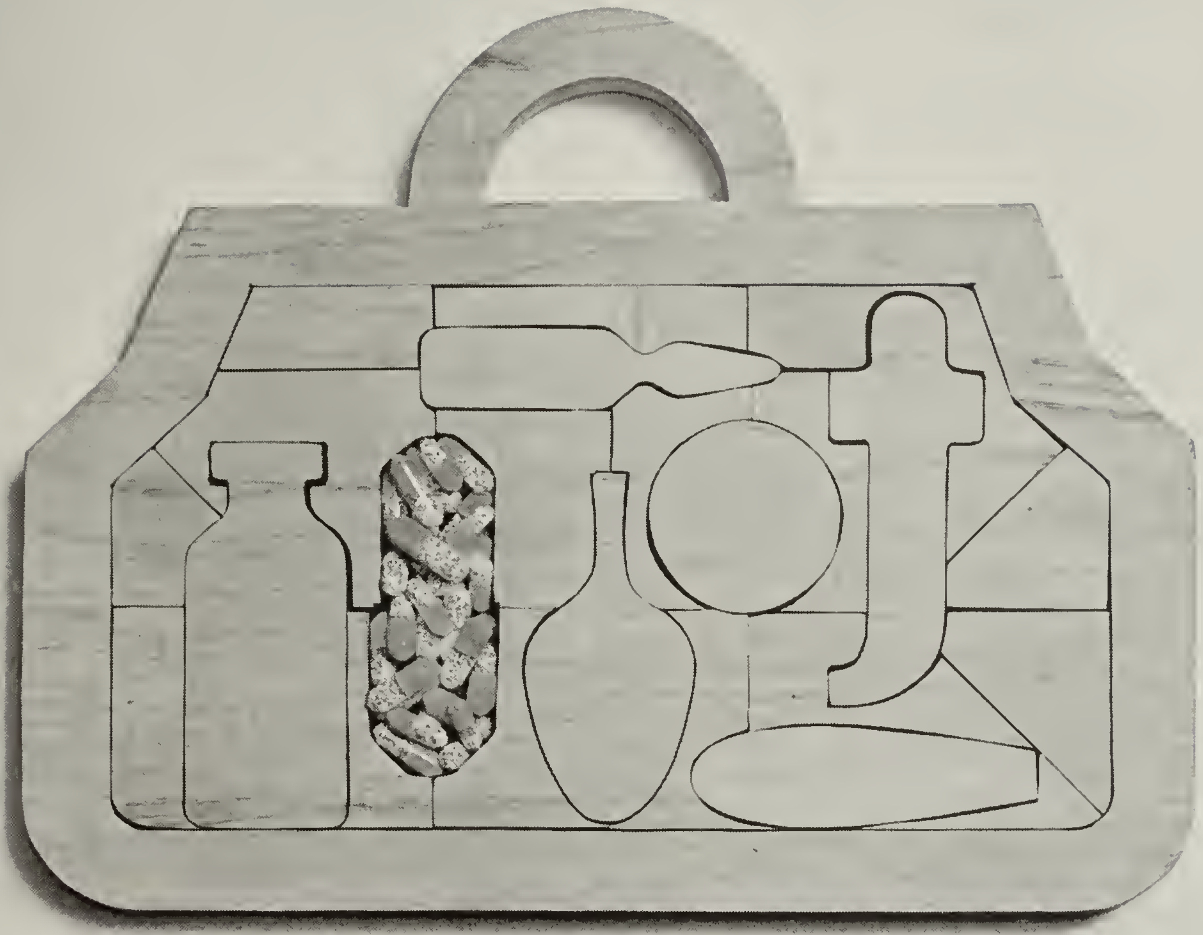
Hector Shedrovilzky, M.D., 1260 Martin Ave., New Kensington 15068.

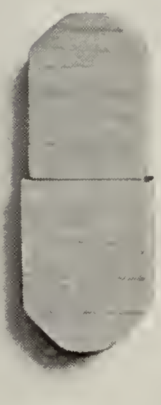
Joseph A. Slezak, M.D., 300 S. Hickory St., Scottsdale 15683.

Lloyd G. Plummer, M.D., 318 Main St., Latrobe 15650.

YORK COUNTY:

Peter L. Zemo, M.D., 924-E Colonial Ave., York 17403.





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PENNSYLVANIA MEDICINE capitol report

In the Commonwealth

Malpractice Relief—It Has to Come

The Pennsylvania Medical Society Commission on Forensic Medicine met with a committee of the Pennsylvania Bar Association recently to discuss the society's increasing concern regarding the inability of doctors to obtain malpractice insurance coverage, and the increase in the number of suits. As was reported the March Medigram, additional meetings will be held. Meanwhile, the state society is watching carefully the progress of legislation to alleviate the situation in the Legislature, and is studying the feasibility of a state-operated malpractice screening program.

On the same subject, copies of the much-publicized report, "Medical Malpractice—the Patient vs. the Physician," was released. This is the report submitted to Congress by the Subcommittee on Executive Reorganization, under the chairmanship of Sen. Abraham Ribicoff, once the secretary of the department of health, education, and welfare, and now senator from Connecticut.

The PMS Council on Governmental Relations, which studied the report in depth, has analyzed it as follows:

The number of malpractice suits and claims is rising sharply in certain regions of the country.

Most malpractice suits are the direct result of injur suffered by patients during medical treatment or surgery. T majority have proved justifiable. These suits are the indire result of a deterioration of the traditional physician-patie relationship.

Publicity given to more malpractice cases, with high settlements, is likely to trigger an increase in litigation, whi could become a national crisis.

The lion's share of the total cost to the insurance compani for malpractice suits and claims goes to the legal communit and the cost for insurance is passed on to the consumer of heal services.

There is a role for the federal government.

The 1,000-plus pages of this report show the absolu necessity for all involved, both the medical and legal profe sions, to find some remedies. The report puts the major burde for finding solutions on the governments and courts of t several states, even while admitting that the federal gover ment must interest itself in the problem. The Council Governmental Relations sees the malpractice problem medicine's major mission for 1970.

In the Nation

Support Sought for Family Practice

In the news section of this magazine there is a story revealing the fact that in thirty-six academic centers throughout the nation, 2,000 doctors last month took an examination under the aegis of the American Board of Family Practice. If the doctors pass the examination they will become the first of a new specialty in medicine—family practice.

Preceding the first examination by just a few weeks was the introduction of a bill in Congress authorizing the spending of $425 million in federal funds to support training programs for family doctors and others in the field of family medicine. The bill was introduced simultaneously in the Senate and the House of Representatives by Sen. Ralph Yarborough of Texas, and Rep. Fred B. Rooney, Bethlehem, of Pennsylvania's Sixteenth Congressional District.

The bill, whose funds would be appropriated through 1975, provides grants to be made by the secretary of health, education, and welfare to medical schools, teaching hospitals and to interns and residents who plan to make family medicine their specialty.

The proposed legislation was introduced on the first anniversary of the announcement of the approval of family medicine as a primary medical specialty. Since that time the AMA and the American Academy of General Practice, a sponsor the new certifying board, have placed major emphasis on educa tional programs at the residence level to prepare doctors fo specialty certification.

The proposed legislation is designed to assist medical school and teaching hospitals to establish quality family practic departments and programs to produce highly-qualified famil doctors as soon as possible. The shortage of primary physician is recognized widely as one of the basic shortcomings of th American medical system.

Among the major provisions of the bill is that an Advisor Council on Family Medicine be appointed to assist the HE secretary to award grants. The council would review al applications and recommend approvals to the secretary.

The bill also covers construction of facilities designed t house the teaching programs; training programs to produc department heads and teachers in the field of family medicine and training for paramedical personnel to work in the field o family medicine.

The appropriations schedule calls for $50 million throug the end of fiscal 1971, $75 million from then until June 30 1972, and $100 million each year for the remaining three years

"All Interns are Alike"

t stands to reason. They all go through the same training; they all have to pass the same tests; they all have o measure up to the same standards; they all are ınderpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more ıonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come ıp to certain required standards, then all aspirin ablets must be alike.

Bayer's standards are far more demanding. In fact, here are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.

PENNSYLVANIA MEDICINE **editorials**

District Councilor Meetings

For many years the budget of the Pennsylvania Medical Society has contained Account No. 223 amounting to $2,400 for District Councilor meetings. At the end of a current year there is usually a balance of around one-half the budgeted amount, which means that many of the Councilor Districts do not use their allotment to hold such a meeting.

Many of the Councilor Districts hold meetings preceding the opening session of the House of Delegates to discuss resolutions and reports from various Councils and Committees which will be presented to the House of Delegates. This does not involve any expense except the rental of space which is absolved in the over-all cost of the Annual Meeting, unless a meal is served during the meeting.

The purpose of this allotment to the individual Councilor Districts is to encourage a meeting, in the spring, of representatives of the district to discuss problems and present reports of interest to the component county medical societies. Those in attendance usually include officers and chairmen of various commissions and committees from the component county medical societies and representatives from the state medical society. The average attendance ranges from thirty-five to forty-five.

The meetings are arranged by the District Councilor with one county medical society being responsible for helping the Councilor in arranging the details of the meeting. The agenda is usually arranged by the Trustee and Councilor and usually includes reports from PMS administrative personnel from Harrisburg dealing with activities of our Councils.

The Sixth Councilor District has a unique program to which pre-medical students from the Pennsylvania State University are invited.

Last year five councilor districts held a spring meeting. The councilor districts which have held their meetings have found them to be of great help in informing the membership of progress made in various state programs, in helping to clear areas of misunderstanding and in giving the membership an opportunity to express their opinions about state and councilor district activities. It is an excellent way to improve communications between the state society and the county societies.

The councilor districts which so far have not held such meetings are urged to do this. It is believed it will be to their advantage to do so.

Wm. A. Limberger, M.D., President-Elect
Pennsylvania Medical Society

Guest Editorial

A New Departure

Although graduates of medical schools are scarcely ready to take care of patients, they are extremely proficient in one field of endeavor. Our educational system in almost all of its phases trains students to take examinations. After high school, college, and medical school a student is well prepared to pit himself against a professor on any grounds—essay, oral, practical, or any of the many types of objective tests.

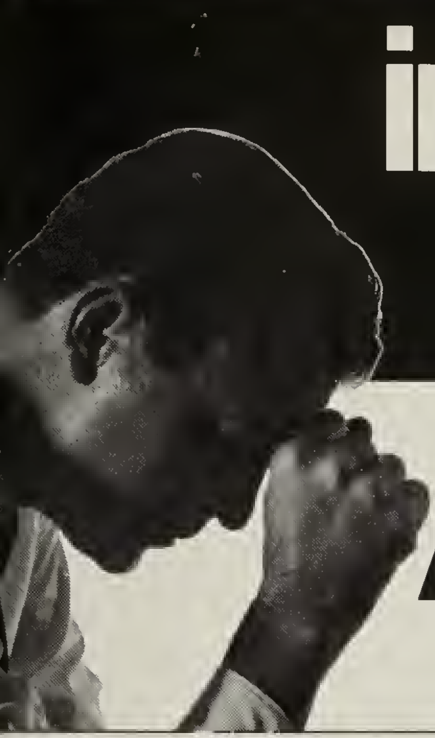
Unfortunately life does not test people in such a neat fashion. The practice of medicine especially adapts itself poorly to such an evaluational technique. This is something that a young doctor has to learn often very slowly and painfully.

In a college type of examination one meets problems one at a time, solves them according to the known prejudices of the examiner and emerges with a high grade. The young doctor naturally tries to apply such an approach to his patients and treats them all by the book. He may have handled nine patients well and one extremely well, and yet because of the wrong word at the wrong time the outstanding case becomes the great black mark that it takes years for him to erase from the minds of his patients.

Although it is not easy for us to picture an alternative, it appears that the old method of teaching people, especially doctors, is ready for the discard pile. I am interested in the new experiments that will admit disadvantaged students to schools of medicine. We have all bowed to the dicta of prerequisites for admission in this country. Often this has resulted in renowned physicians from abroad who could not be licensed because they lacked high school English courses. Lately some correction has been made of these errors but most medical schools have found it convenient to consider only the applicants with top academic grades. Young men and women with D averages or below are automatically dropped from the list of those who are invited for interviews. I wonder how many great humanitarians have been turned away at that door?

I predict that there will be much turmoil with the new influx of a different kind of student. I also predict that if they get half a chance, some of these men will prove to be great and good doctors. It is very likely that this new development which has been forced upon our society will represent the dawn of a new day in American medicine.

George A. Rowland, M.D. Editor
Bulletin of the Columbia County Medical Society



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T. Jakobovits
Fertility and Sterility, January 1970
Official Journal of the
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References: 1. **Montasano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence Clin Med 12 69, 1966 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound West Med 5.67, 1964 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence Gen Prac 25 6, 1962 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone J Clin Endocr 19:936, 1959 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79:863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Wershub, L. P.** Sexual Impotence in the Male Thomas, Springfield, Ill., 1959, pp. 79-99.

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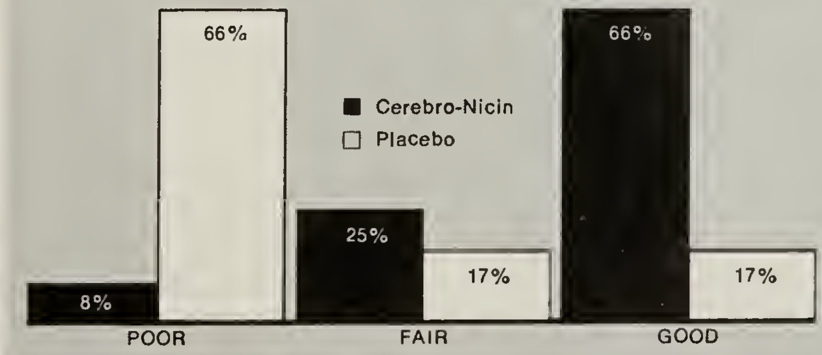

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Symposium on
Sports Medicine

GERMANTOWN ACADEMY, FT. WASHINGTON, PA.
AUGUST 14–15, 1969

.....*time to share and synthesize*

Sports medicine is a perspective, easier described than defined. It involves sports but is not limited to organized athletics. It involves medicine but is not limited to injuries.

Essentially, sports medicine is oriented to the health implications of man in physical activity. Man apparently benefits throughout life from being regularly and suitably active; however, the benefits are not automatic outcomes, involve a calculated risk and are subject to interpretation.

The assumptions to which sports medicine subscribes require the interpretation and refinement that only competent research activity can offer. They also require for application to the individual the appropriate decisions that only a competent practitioner can make. Sports medicine thus has a task of linking research and practice. Information relating to particular aspects of man in activity needs to be made relevant to immediate utilization demands as well as be subjected to further evaluation. Such utilization and evaluation warrant an acknowledgement of, and sensitivity to, the combined influences of physiological, psychological, and cultural forces.

There is no single profession to be defined for sports medicine. Medicine, regardless of whatever qualifying adjective reflects its particular sphere of interest—remains medicine with all the responsibilities and prerogatives expressly defined for it by society. However, the task of sports medicine requires the involvement of a number of professions, each in accordance with its respective competencies and interests.

Sports medicine draws from the various professions but does not absorb them. A mutual understanding and respect among these professions, therefore, is necessary for the promotion of the ideals of sports medicine. While physicians, educators, athletic trainers, biological scientists, and behavioral scientists comprise most of sports medicine's professional reservoir, conceivably any professional person could apply his competencies to some component of sports medicine. The meaning of sports medicine is its responsibility to share, respect, and synthesize the interprofessional and interdisciplinary implications of these components.

Formerly, the only association between sports and medicine in most people's minds was the image of the doctor clutching his little black bag as he rushed across the playing field to the aid of a man lying on the ground. Even athletes as highly trained as those preparing for the olympics often regarded medical advice as something to be sought only in case of emergency or when something went radically wrong.

This attitude is changing and a new branch of knowledge has arisen: sports medicine. It's aims are broad and encompass preventive and educational work in addition to curative measures. Pennsylvania is a pioneer in the development of sports medicine on two flanks.

At the campus of the Pennsylvania State University in State College, a skilled research team of physicians and physiologists is helping the athlete achieve an excellent of performance in the safest and best-managed environment through intensive experimentation, monitoring and evaluation of the human body's response to varying degrees of physical stress.

On the eastern flank of the Commonwealth, in Fort Washington, Germantown Academy conducts its annual midsummer symposium on sports medicine for the purpose of providing a review of modern developments in sports medicine with particular emphasis on conditioning, mental and physical, and the prevention of injury. The articles which appear on subsequent pages of this issue of Pennsylvania Medicine are but a few of the sports medicine topics discussed at the Academy's symposium last year.

In commenting recently on the strong need for communication between the researcher in sports medicine and the doctor on the playing field, William C. Grasley, M.D., Penn State team physician, said: "Between the physician and the researcher, there has to be some way for us to learn what is being done, why it's being done, how it's being done—and most of all to make the work worthwhile by getting the results of the cooperative efforts of research and the physician to the athlete."

..... *time to be recognized*

DAVID G. MOYER, M.D., Medical Director, Germantown Academy; Sports Medicine Consultant, PMS Commission on School Health.

In the "letters to the Editor" section of a sports oriented publication distributed to the medical profession, a request was made for information by a school physician. He wanted information on a drink used in athletics to maintain adequate water-chemical balance to prevent heat exhaustion. "We have had eight cases of heat exhaustion this fall," he stated.

This winter I encountered a young friend of mine—beautifully constructed, highly intelligent, a very skillful 138-pound fourteen-year-old wrestler. I stated that he appeared somewhat languid and drawn. "I've lost 16 pounds making weight," he countered.

After a preseason scrimmage on a hot, sultry night last fall with a team from another league rated twenty points better, we were trudging off the field. Better conditioned and well hydrated, we had really "put it on" our opponents. Exhausted, our opponents made for our abundant supply of water and ice only to be halted by the stentorian command of their coach—"Don't drink that stuff, it'll make you sick!"

These three instances of utter lack of understanding of the rudiments of conditioning are commonplace throughout our country. This is in a country of increased leisure and affluent society, facile transportation and improved communications with an infinite increase of interest and participation in sports activity.

Fifty years ago schools and college fielded football, baseball and attenuated track teams. Now the average secondary school participates and/or fields teams in fifteen or more sports, in all seasons, often with teams for both sexes.

The existence of this healthy, changing volatile situation should not be ignored by the medical profession. Student, parent and public are actively involved—competitively, materially and intellectually.

However, the field of athletics is studded with quasi-scientific ideas, fads and prejudices founded on superstition, lack of precedent and little or no documentation. These ephemera are nurtured and cherished with zealous devotion. The AMA Committee on the Medical Aspects of Sports has made available at minimal cost a series of pamphlets invaluable in dispelling these fallacious concepts. These should be made available to all coaches and athletes.

Now opportunities for learning would appear to be on the increase. Sports medicine related advertising, text books, journal articles and symposia are becoming more common. The AMA Committee on the Medical Aspects of Sports, The American Academy of Orthopedic Surgeons, The American College of Surgeons, The American College of Sports Medicine and the National Athletic Trainers Association are all taking a more active part in this important Public Health Problem.

In the confused and controversial era in history in which we find ourselves, we find the participating athlete in any sport a highly motivated, singularly stable, approachable individual. To share his experience is a refreshing exercise in the intercourse of today. His coach, trainer, and sports officials are also a highly digestable breed. To be fortunate enough to participate in the field of sports medicine is one of the most rewarding experiences in hectic medical life.

Coach, trainer, official, administrator, and most of all, the athletes, are extremely willing and anxious to accept the counsel and interest of the physician. Indeed, the National Athletic Trainer's Association accepts for membership all interested physicians, honor us with the title of advisor, and accept no dues!

The encompassing nature of the sports boom with its influence and importance to everyday life has been slow of recognition. The problems of sports medicine loom ever larger. They relate not only to the school physician but to every day practice in all fields. As a public health problem, sports medicine deserves our unqualified interest and support.

Germantown Academy
. . . pioneer in sports medicine

Germantown Academy, founded in 1759, is one of the country's oldest independent schools. Its twenty-two founders were English, German, Swedish and Dutch and their religious beliefs included Quaker, German Reformed, Mennonite, Lutheran, Dunker and Separatist.

The school has been in continuous session except for the years 1778 to 1784, which the trustees record as the "distressed times" when Germantown citizens were torn between two loyalties in the American Revolution. After the battle of Germantown, the school served as a hospital. Six British soldiers are buried close to the old building.

The original weather vane on the belfry still carries the "crown of England," and the copper ball beneath it bears the marks of musket balls fired at it by the British camped on Germantown Ave. near the Wister House. The bell, brought over on the teaship, Polly, in 1774, and returned to England with the controversial cargo, made its second voyage ten years later and has been ringing ever since for the opening of the school day.

During the yellow fever epidemic of 1703, President George Washington lived next door in what became the administration building of the academy and held his cabinet meetings there. The following year, the president sent his adopted son to the Public School of Germantown as it was known in those days.

In December of 1958, one year before the bicentennial of the academy, the board of trustees voted to accept the offer by Robert McLean of 160 acres of rolling meadow and woodland, traversed by the Wisahickon Creek, in Fort Washington. Ground was broken on June 6, 1960, for the first building of the new campus.

The name "Germantown Academy" was popularized by *The Pennsylvania Gazette* as early as June 11, 1794, and gradually the old title of "Public School" was dropped except as the legal title of the academy.

The Administration of A Secondary School Athletic Program

LEONARD A. PLANTZ, Director of Athletics, Mercersburg Academy

Although I do not wish to dwell on the point, the first order of business for athletic directors at the secondary level throughout the country is to attain a respected professional status. If you are fortunate enough to have such a position in a school which provides you with the space, secretarial help, time, facilities, and staff to do the job, you are one of the lucky few. Although personally I have been fortunate enough to achieve that status during the last decade, I still suffer the frustration in my relationships with others less fortunate who attempt to teach a full schedule, coach, administer a multi-faceted athletic program, and line the fields by moonlight. The result is unanswered letters, unanswered phone calls, scheduling mistakes, turning the scheduling and administration of each sport over to the coach of that sport, etc. The Pennsylvania State Athletic Directors Association, in its spring meeting, passed a resolution which speaks for itself:

Whereas: The Pennsylvania State Athletic Directors Association:

"Realizing that athletics are an integral and important part of the total educational program is our respective schools; and

Realizing that the direction and administration of athletics are important and demanding functions in the life of a school program;

Now, therefore, be it resolved that:

The Pennsylvania State Athletic Directors Association respectfully requests that hereafter all those responsible to the high school principal for the conduct of athletics bear the title, statewide, of Director of Athletics and that they be provided with necessary time and assistance to properly and professionally administer the athletic programs in their schools."

Qualification and Duties

Athletic Director—It is the duty of the athletic director to attend to all business details pertaining to the athletic program. To accomplish this there must be policies established in the school with responsibilities delegated to various individuals. The athletic director, to be successful, must be familiar with the entire school system and community of which he is a part. To fulfill his qualifications he must:

1. Have a complete understanding of the athletic policy of the school administration and his thinking and objectives must be in accord with the program desired by his administrative superiors.
2. Possess sufficient interest in, and knowledge of, all the sports included in the school's athletic program, in order to know their needs and deal with them intelligently.
3. Be qualified to conduct efficiently the business details involved in interscholastic sports.
4. Maintain an approved relationship with community leaders who have legitimate interests in the success of the school's athletic program.
5. Fit into the school and faculty activities in a genuine manner.

Duties:

Division of Duties

It is vital that the athletic director have a definite understanding of the duties and responsibilities of the coaching staff members, the team physician, the trainer, student managers, the equipment custodian, the maintenance and grounds crew, the physical education and intramural staff, and the athletes themselves. As in any organization, each individual in athletics has his duty to perform. In an independent secondary school it is imperative that the responsibility for all facets of the athletic life of the school be under the central direction of the athletic director. It is just as imperative that he, in turn, delegate authority and responsibility in every area. If there are only two field maintenance men, one should be in charge and responsible to the athletic director. A head custodian in the gymnasium should make all the little decisions about how a job is to be done. In most independent boarding schools all athletic activity takes place between the end of the academic day and the dinner hour. Such a concentrated (and perhaps unwise) use of facilities requires very careful planning in order to provide an athletic program that is adequate for everyone. Mainly for this reason, a majority of the faculty must become involved in the athletic program in one way or another. The organization of our athletic department in this compressed time schedule is accomplished for intramural sports by a physical education director and two professionally trained assistants. Each physical education instructor has area responsibilities (pool, outdoor fields, physical education gym, games gym., etc.) and each instructor has faculty assistants who normally are assigned two afternoons per week.

Each interscholastic sport has a head coach who is in complete charge of that sport. In each case he is assisted by qualified faculty members. The emphasis is put upon having someone in charge and responsible. Head coaches sit down with the athletic director and discuss policy, equipment needs, delineation of responsibility, etc. Every individual, faculty, student, and athlete likes to be an integral part of the group of which he is a member. The athletic department of any school provides a unique opportunity to harness and utilize this desire in a constructive and useful way.

Objectives and Principles of Athletics

The athletic director's first duty is to see that high standards are maintained throughout the entire athletic program and his first responsibility is to the boy who is participating in athletics. Winning games, publicity, gate receipts—all are secondary to the educational development of the boy. A sound athletic program must be based on sound educational principles. If it does not fulfill these requirements, it will be difficult to justify. Most educators in the field include these specific and worthwhile objectives:

1. Development of physical fitness and skills
2. Development of mental alertness
3. Development of moral qualities

4. Development of social abilities

5. Development of emotional maturity.

If these worthwhile objectives are to be achieved,

(a) athletics must be based upon broad participation,

(b) must be supervised by trained personnel,

(c) competition must be controlled.

In the independent boarding school we firmly believe that for students at the secondary level *total* participation by all students must be accomplished by offering a broad program at as many levels as possible. In our school this is accomplished in the following way:

(a) *Broad Participation*

Interscholastic Sports

Fall (40 per cent of student body)
three football teams
two soccer teams
two cross country teams

Winter (35 per cent of student body)
three basketball teams
two wrestling teams
two swimming teams
squash
fencing

Spring (40 per cent of student body)
two baseball teams
two track teams
two lacrosse teams
two golf teams
two tennis teams

Intramural Program

Our school is divided into two clubs, controlled by an athletic council, into which all new students are drafted in the fall, after a week of tryouts, by student leaders of opposing clubs—each club selecting a name alternately until the roster is exhausted.

Competition is carried on between these two clubs (which are separated by age and grade into two divisions) in numerous activities throughout the year. For example, during the fall a boy must try out and compete for two club teams. Club officers elect team captains, hold tryouts and cut squads to required size, and to a great extent run their own program. Normally a boy would compete on two club teams from among water polo, basketball, flag football, and soccer. We have enough facilities and teams to enable every boy to participate. A point system is kept and team standings published weekly. At the end of each term all-star contests are held between the clubs' best players, following which the whole program is re-organized for the next term. Intramural teams meet for one hour per day and four times per week. Wednesday is left free for these boys to support and enjoy their classmates on the interscholastic teams, who compete on Wednesdays and Saturdays. Once a boy has met his intramural requirement for the day, he may be free, take instruction in lifesaving and water safety, trampoline, etc. as voluntary activities, or practice his interscholastic sport specialty for another season. During the winter term indoor competition is held in basketball, volleyball, squash, swimming, and wrestling. In addition, every boy has one period of swimming instruction and one period of vigorous physical fitness per week. Tournaments between clubs are also held in such activities as badminton, pool, table tennis, chess, bridge, trap and skeet shooting, etc. Although all must engage in the physical activity, many derive their greatest enjoyment and benefit from the non-physical competition.

Boys who are injured, or boys who have been determined to have special physical limitations or needs are put into a special program, with each boy's special problem studied by the doctor, leading to a program tailored to his needs. Seldom is a boy excused entirely.

We feel that a program of competition, properly motivated, more nearly meets the future physical and recreational needs of later life.

(b) *Supervision*

Although it is wonderful to have extensive facilities, even more important is the athletic staff. As in any area of life, the calibre of the individual ultimately determines the success or failure of the program. Although most coaches in boarding schools are basically academic teachers, it is possible for a wise headmaster to select a staff that can do a good job in each area. Of our fifteen interscholastic coaches active during the fall term, all have fair to excellent sports experience in high school and college. A good athletic staff is a must, and the athletic director must play a paramount role in developing one.

The athletic director should interview all prospective candidates for key jobs in the athletic department and his advice and judgment should be noted once academic qualifications are satisfied.

Coaching assignments should be made by the athletic director after consultation with and approval of the headmaster or principal. In this way there is no question in the minds of the athletic staff as to whether athletic policy and philosophy of the athletic director and of the school are identical. The success of any program depends on the personnel who direct it. Without well qualified, competent personnel neither ideal facilities nor equipment will create a good program. Even though the person to be hired will be involved in the athletic program, the main consideration should be given to his qualities as an educator. On the other hand the athletic director should not be saddled with an incompetent person on his staff; he should determine the qualifications of the members of his department.

Coaching Qualifications

1. Experience—an inexperienced coach may have extensive knowledge of his sport, but there are many little things that can be learned only through experience.

2. Emotional Control—This is difficult to identify at the interview stage. Outbursts of an emotionally immature coach may negate his other qualifications. Sometimes discreet inquiry at his previous place of employment will give the clues that are needed. Preferably, your own staff should develop its own head coaches.

3. Broad Educational Background—He should at least understand some basic principles of educational and adolescent psychology and of basic physiology.

4. Courage—Confidence and success come only when one has the courage of his convictions. Courage will also be needed to face criticism, which is bound to come.

5. Sense of Humor—A good laugh can be just the remedy for a tense situation, changing the outlook of everyone involved.

6. Responsibility—An athletic director expects a coach to be responsible for proper teaching of the athlete, proper supervision, proper care of equipment, etc. A coach who shows up at time for practice to start and disappears the moment that the practice session or game ends is neglecting his responsibility. The coach's responsibility is continuous from the moment the boys report to the locker room until the last boy leaves after the game. Unsupervised boys cause

unpleasant incidents. In addition, any coach who does not accept the responsibility for the issuance, care, and proper return of athletic equipment will find himself receiving the bare minimum in future requisitions.

Control of a Sports Program

Athletic goals should parallel the aims of education in general: to better prepare the youngster for the future. The real job that must be done lies not so much in the interscholastic program as in the physical education, intramural, and recreation programs. They reach everyone. Potential danger areas requiring close athletic director supervision and control may include the following:

1. The high school coach shouldn't be permitted to supervise the operation, including the practices, the system of play, and the schedule of younger teams because the danger of overemphasis becomes acute.
2. Overcoaching: Coaches, in their efforts to achieve perfection, are making insane demands on their players. They encourage boys to dedicate themselves to a single sport—to work like beasts to become champions. Instead the boy should be given the time and encouragement to explore as many facets of school life as possible. Unrestrained, coaches will persist in hogging their boys' time and making them "pay the price" for perfection.

In the final analysis, the moral responsibility of every administrator lies not in the actual mechanics of administration but in the boy himself. The administrator must continually strive to get as many boys and girls as possible into a wholesome, healthful athletic program which will have meaning in post-school life.

School Image

The athletic program touches more school faculty and staff, more students, more alumni, more of the public than any other facet of school life. Unfortunately, in most instances about the only inter-school relationships are of an interscholastic athletic nature. People are prone to judge a school by the image created by a few moments during an athletic contest. Although this may be grossly unfair and distorted, overt actions and attitudes displayed by players and coaches before, during, and after a game often implant a permanent brand on a school.

The athletic director should consider this public image one of his major responsibilities. Visiting teams are guests in your school, invited by you, in the same sense that guests are invited into your home and should be treated accordingly. A coach or athletic director who does not know how to treat guests in his home is rare. The rule is simple—the Golden Rule. The athletic director himself should meet and greet the visitors, show them to their dressing quarters, review the details of all arrangements for their stay, look after their needs, escort them to meals, reassure them regarding medical arrangements in case injuries occur, etc. I cannot emphasize too much this role of the athletic director. Any athletic contest worth viewing is charged with partisan emotion but three groups must remain aloof from this trap: the game officials, the respective coaches, and the athletic directors.

When school spirit is transformed into mass hysteria, the coach is exceeding his privilege. Values go out the window and somebody is bound to be hurt. When cheerleaders, bands, squads, and coaches go about their tasks as if the fate of civilization hangs in the balance, it is stupid and dangerous. Teams can be brought to a competitive peak without exploiting super-emotionalism. Overstimulated fans and players start riots. The director of athletics who permits coaches to steam up a team with exhortations such as "revenge" and "destroy" is in the wrong business. Losing graciously is something Americans have yet to learn. To a large extent the character building potential of sports is directly proportionate to the character of the coach. He can do much for his players or he can do more harm than good.

Communication

Once areas of authority have been clearly delineated and the staff members put in complete charge of a respective activity, each responsible member now is put in the position of making policy, enforcing rules, developing programs, and innovating. In this way each staff member who has area responsibility now comes to feel a part of the administration rather than an employee of it. The danger in this approach lies in inadequate communication between the director and his staff. In an age when one can see and communicate with, instanteneously, a man on the moon one-quarter million miles away, it seems improbable that most of our human problems stem from "lack of communication." Although I personally believe that most cases of "lack of communication" really infer "lack of agreement," there, nevertheless, is a danger among busy people of lack of understanding. Therefore a must for any athletic administrator is a private office, adequate secretarial help available at a specific time each day, adequate and well organized files and records. A large bulletin board within reach of the desk and telephone should contain a listing of all the athletic contests for the year. When completed the form will show, vertically, a complete listing of the schedule for each team for each season and, horizontally, a complete listing of game activity, home and away, for any given day. Add to this a listing in colored pencil of known conflicting school activities, vacations, C.E.E.B. dates, etc., and potential errors can be held to a minimum. All communications should be typed and carbons filed. This includes all requisitions for transportation, meals, equipment, etc.

Department rules and policy should be clearly enunciated and posted on bulletin boards accessible to all students and in the faculty locker room. The details of meal times, mode of transportation and departure and return times, contest times, and all detailed and pertinent information should be listed and posted by the week on the coaches bulletin board. Thus the irritation of remembering and repeating the details for a dozen teams to a dozen coaches is avoided and the chance of error minimized. When possible, individual teams should have separate locker rooms equipped with blackboards and bulletin boards.

Every school administrator should provide his athletic director adequate time to take care of the myriad details and the correspondence during the day. Once the boys and athletic staff start arriving at the gymnasium, he should be free to "communicate" with coaches and students. He should spend the afternoons largely observing the programs in operation and noting needed changes, improvements, criticisms, and commendations.

Role of the Athletic Director in Relation to the Medical Department

The athletic director who works in a school large enough to have a full-time doctor is fortunate. This automatically shifts many burdens and problems from the athletic department to an area properly and legally qualified to handle them. Just as athletic people at a sports medicine symposium can gain a great deal from listening to the problems and professional approaches of doctors, it may be beneficial to some doctors to hear a viewpoint or two from those who cause them their work and woe, the athletic people.

1. A doctor is not very helpful in the area of sports if he treats athletic illnesses and injuries as he would in private practice to coddle mother or even grandmother. From a sports viewpoint, the coach and team benefit most when the recovery time of an injured athlete is shortened and rehabilitation is complete. All doctors who specialize in sports medicine appreciate this, but many school doctors do not. Some coaches will use boys in contests before the boy is physically ready; some doctors will withhold an athlete from competition or delay his return to action due to the lack of a sense of urgency because he feels the athletic part of the life of a boy or a school is not that important. Some doctors will always feel this way, but *team* physicians and properly motivated coaches should have an identical objective: as speedy a return to action of the injured athlete as is practicable and safe.

2. Physicians should respect the coach as a professional, just as the coach should reciprocate. Just as the doctor would not tolerate interruption in the midst of his examination of a patient, so should he respect the coach during the intensity of his work on the practice field.

3. The whole week's game preparation may be conditioned by whether a certain player or players will be available. "Maybe" and "false hope" have no place here. Complete candor and a conservative return to action date will be more greatly appreciated in the long run.

4. Student trainers can better be directed and trained by the doctor who knows exactly what he would want them to do and exactly the limits of their ministrations. This way the doctor knows better exactly what the medical situation is on the many practice fields and his efforts can be more educative than recriminatory. And what a fine experience for student trainers!

5. As admission standards and academic demands continue to mount, a larger percentage of students, at least in independent schools, seem to be less interested in physical development. "Gold-bricking" to get out of athletics has become more a problem. At our school, the medical department and the athletic department have developed a partial solution which reduces the doctor's time burden and enhances the athletic program due to reduced absenteeism. The doctor fills out or at least signs a form. He does not permit the nursing staff to make the decision and he almost always signs the form personally.

6. School physicians are in a unique position to add greatly to our body of knowledge regarding the cause, incidence, treatment, and prevention of athletic injuries. An enterprising doctor who loves sports and is dedicated can assemble and evaluate large quantities of detailed information which is the key to injury prevention and is available in no other way. This information can be very valuable to the athletic staff who may not realize the magnitude of the problem and who may be able to change methods and practices in order to reduce frequency of occurrence. Certainly a few thousand such records kept over a period of time might direct the research specialists to necessary clues of prevention.

The School Nurse And Athletics

BARBARA SEBASTEANSKI, R.N.,
Nurse to Bowdoin College; United States Olympic Team

As a school nurse at Bowdoin College, a small liberal arts college in Brunswick, Maine, I see most of the students at some time. Bowdoin is a male residential school with an enrollment of 950 students. I have been employed there since 1947. We have intercollegiate competition in sixteen sports. There is also a strong intramural program and a two-year physical education requirement. All this activity, combined with a small enrollment, inevitably involves most of the student body in one way or another. Therefore, with all this athletic activity and the usual ailments, we at the infirmary see most of the students at some time in their college careers. During my time at Bowdoin it has also been my good fortune to serve the United States Olympic Committee on four different occasions.

The Bowdoin College Infirmary has full hospital accreditation and we are fortunate to have Daniel F. Hanley, M.D., as head of our staff. Dr. Hanley is head physician for the U.S. Olympics Team. He is well qualified in the diagnosis and treatment of athletic injuries. He is also acutely aware of the value of physical fitness and good fitting equipment as a preventive against injuries on the playing field.

The school nurse is a member of a team working with the college physician. Besides being well-trained in the arts of nursing, she should have some knowledge of physical therapy, rehabilitation, the techniques of X-ray and laboratory procedures.

Everyone knows that there is a trend toward giving the nurse more responsibility. This is why it is so important for the nurse to be able to recognize illnesses and injuries, and to evaluate the severity in order to channel these in the right direction. The ability to do this will come only with close supervision and experience. The nurse should know what she is expected to do, and what she is allowed to do, but still realize that she is responsible for her own actions.

I'm sure that every school has worked out a convenient system to recognize and record potential danger spots among the incoming students. Before a student matriculates, his pre-entrance physical is studied by the school physician and nurses. It is important to note if the

(*Continued on Page 49.*)

PROTEIN CONTENT / 7 oz. Serving*

Bean with Bacon	6.8	Green Pea with Ham (Frozen)	7.6
Beef	8.0	Hot Dog Bean	8.4
Chicken Broth	5.5	Pepper Pot	6.1
Chicken 'N Dumplings	5.8	Split Pea with Ham	10.2
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We wish to thank Drs. Marcia K. Bilbao, Louis H. Frische, Josef Rösch and Charles T. Dotter for this exceptionally graphic example of hypotonic duodenography.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

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982

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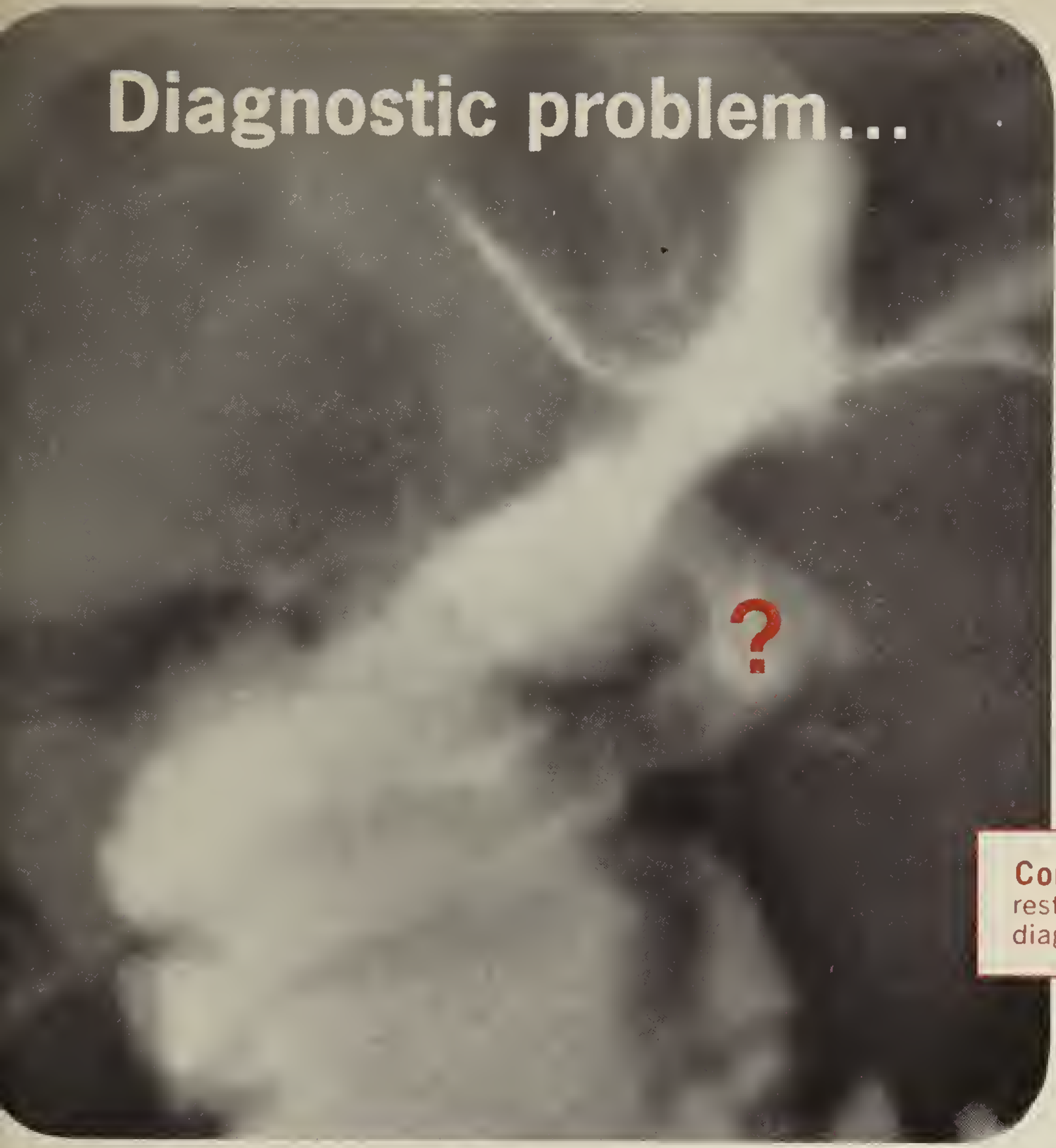
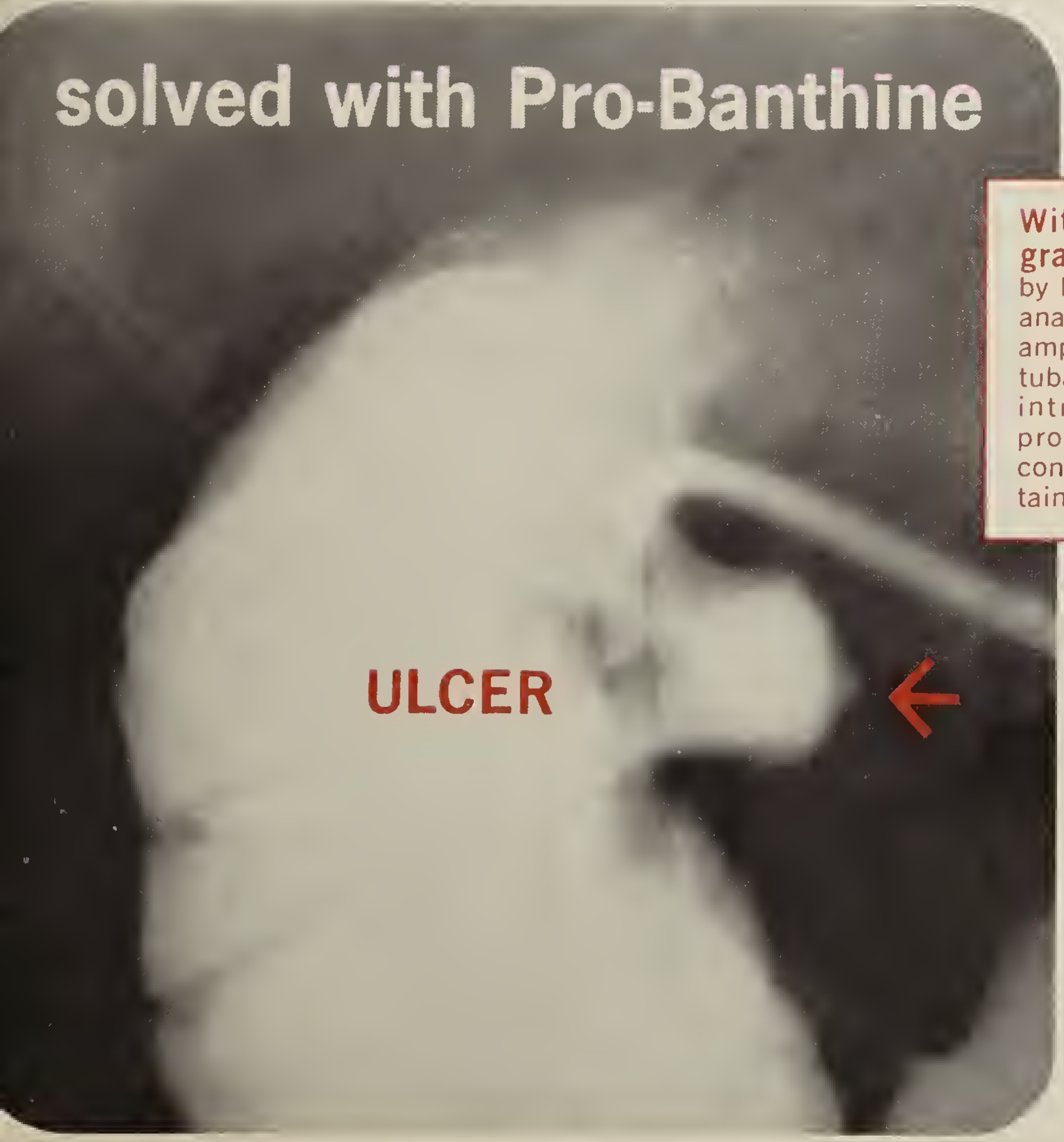


Conventional x-rays of the restless duodenum are often diagnostically indefinite.



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Supplied: 'AVC/Dienestrol Cream'—Four ounce tube with applicator. 'AVC' and 'AVC/Dienestrol Suppositories'—Box of 12 with applicator.
References: (1) Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. (2) Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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student has a history of a serious injury or operation, unusual disease or reaction to a specific medication, etc. The system we use is simple but effective—colored stars are put on both the student's chart and filing folders. Red denotes reactions to medications, blue unusual diseases, etc. Having this information readily available saves time when doing the pre-participation physicals that are done on athletes in the intercollegiate sports. However, it is amazing how much information is acquired by talking to an athlete. Some are hesitant about recording their problems; and, of course, there are some who think that their problems are unimportant.

In the physical examination, height, weight, blood pressure and pulse are recorded and eyes and urine examinations are done by the nurse. The doctor then completes the physical. The emphasis varies slightly depending on the sport. For instance, swimmers are questioned about allergies and ear, nose, and throat problems. This is important but not emphasized when doing football physicals. In football, the emphasis is placed on those men who have histories of concussion and injuries to the extremities. In spite of the fact that some students are eager to participate in a sport, they are not permitted because of poor physical condition or disease which may make the athlete vulnerable to injury.

We maintain a check list for protective equipment for boys with histories of specific injuries. This is noted on his record and he is issued special equipment or assigned for strapping. If an athlete has a history of a dislocating shoulder he is issued a Duke Wyre harness. Previous knee injuries are taped with a diamond or duke simpson strapping for practices as well as games. Unfortunately, everybody wants adhesive strapping whether they have been injured or not. This preventive strapping inhibits development of the part in question through usage.

Supposedly we are dealing with a healthy, intelligent age group—a group contributing of themselves in an extracurricular activity of their own choosing. College years are very impressionable for most—a time when attitudes are formed. It is the duty of the nurse to promote better physical, and at times better mental, health within this group.

When doing physical examinations we try to make medicine an educational thing. Problems of dehydration are discussed. Athletes are advised to increase fluid and salt intake during warm weather, encouraged to use ankle wraps, advised of the importance of good skin care as a preventive against folliculitis and other skin infections. In so many words we try to emphasize prevention and the importance of prompt treatment. In spite of our best efforts, we come up with the following statistics for the school year 1968–69: 10,959 out patient visits, 389 in patients, 833 patient days, 367 miscellaneous injuries, and 563 athletic injuries. 4,970 physical therapy treatments were given. This figure does not include those treated in the training room. I realize that these figures for 950 students may stagger you, but we attribute this to our emphasis on prompt treatment for any injury no matter how slight.

Some of the mechanics of treating injuries are:

a) All lacerations, abrasions, puncture wounds, and joints to be aspirated or injected are first scrubbed with soap and water. I firmly believe that due to this simple procedure we have a minimum of infections. Wounds are exposed to the air to help promote healing except when the athlete is competing.

b) Less medicine is dispensed today because of modern health problems. A medication often contains the same drugs as those which are sought for non-medicinal purposes.

c) Skin infections have increased since some students have stopped using soap, water, and shoes. Thank goodness this group is in the minority; but, regardless, they have to be treated. Moist heat is applied to the infection in the form of sitz baths, hot packs, or infra-red treatments. On the extremities an insulated boot or sleeve is applied for several hours with amazing results.

d) Achilles Tendonitis: I have never seen an effective way of immobilizing this area except with a cast. It's interesting to note that for years very few women had this complaint, probably due to the fact that they wore high-heeled shoes. Now that women are wearing sneakers and sandals I understand that this is no longer true. Athletes with achilles tendonitis are always given a thick felt heel to place inside their shoe, plus deep heat treatment.

e) Dislocation of shoulder: The patient is placed on his abdomen. The injured shoulder is extended over the edge of a stretcher with the arm in a hanging position. Just by gaining his confidence and reassuring him that the reduction will not be painful, it is seldom necessary to use a relaxant. While talking to the patient, steady even traction is applied to the lower arm. In the matter of several minutes the dislocated joint reduces itself. X-rays are taken, stockinette swath and ice are applied.

f) A patient with a known head injury is always kept under observation. His blood pressure and pulse are checked frequently. He is questioned at intervals until well-oriented. Signs that indicate need for closer observation include nausea and vomiting, drowsiness, lack of reaction of eyes to light and accommodation.

g) Patients with abdominal pain are always kept under observation.

h) The *ankle* is the joint that is most frequently injured—but the *knee* is the joint that is most frequently seriously injured. *More freshmen have had knee problems than any other injury.* If a student complains of pain and is disabled after injuring a knee he is admitted—the joint supported—ice applied. At the proper time quadriceps setting exercises and weight lifting are started. These exercises are a must before an operation on the knee joint.

Routines that are designed to care for most of the problems that do arise, are strictly adhered to in the treatment of all injuries. Changes are made only for individual cases. This recalls one case to mind—a student walked into the infirmary stating that his knee and lower leg felt strange and that his foot was numb. There was no history of injury, but after he was questioned he remembered that he had fallen going upstairs two days previously. I was unable to get a pulse and the color of his foot was poor. When a nurse is confronted with this kind of problem, she knows it is serious and the doctor sees the patient immediately. This particular student was hospitalized with a thrombosed popliteal artery.

During the years that I have been in institutional nursing, there have been many changes in the treatment of athletic injuries. Mechanized treatments and wonder drugs are available. But let us not forget that in spite of all these modern advantages, many times the theory that nature takes a certain length of time to heal any injury.

Some of you may be interested to know what is expected of an Olympic nurse.

Last August I spent two weeks in Los Angeles assisting with physical examinations given to each contestant. The physicals included complete blood studies and collecting data on the menstrual history of the female athletes. Screening sexual chromatin tests were done on all female athletes. These were repeated in Mexico City by the International Olympic Committee. Records were then filed of the results so that these tests would not have to be repeated in future competitions sanctioned by the I.O.C.

Processing the team was done in Denver one week prior to departure for the games. Vaccinations and tetanus toxoid boosters were updated. All athletes and administrative personnel were given gamma globulin.

In Mexico, the first floor of the U.S. men's dormitory at the Olympic village housed an administrative office, the trainer's room, and the medical clinic. The nurses' duties were confined to the clinic and were much the same as institutional nursing.

The Mexican Olympic Committee also had facilities set up in the village for X-rays, dental work, and pathological studies. These were available to athletes of all nations.

Attending the games is not all work for anyone. We were given time off to shop, go sightseeing, or attend the competition.

Any registered nurse interested in applying, may do so by writing to the United States Olympic Committee, Olympic House, 57 Park Avenue, N.Y., N.Y.

Certain Aspects of Women's Participation in Sports

CLAYTON L. THOMAS, M.D., Medical Director, Tampax, Inc.; Consultant, Center for Population Studies, Harvard School of Public Health

The concept of a sound mind in a sound body needs no defense. It does, however, need examination and dissection if we find that there are forces at work which somehow prevent the application of this idea equally to both sexes. We need look only at the school athletic program budget to demonstrate inequities. In most school systems an inordinately small portion of the budget for sports, physical fitness and recreation facilities are allocated for girls' programs.[1]

Other indications of the feeling that physical education, sports participation and physical fitness are mostly for males can be found in the evidence provided by the history of women's participation in the Olympics.

According to H. A. Harris,[15] women were not allowed to compete in the ancient olympic games. The modern Olympics, when started in 1896, did not include female contestants. In 1968, at the XIX Olympiad in Mexico City, less than half (56 out of 115) of the countries included men and women on their teams. Of the 6,084 athletes, only 844 (14 per cent) were females.

Not until 1969 was a major effort made to provide opportunities for women's intercollegiate competition in certain athletic events. The work of the National Joint Committee on Extra-Mural Sports for College Women and later the Division of Girls' and Women's Sports Committee in Intercollegiate Athletics of AAHPER, made this possible.[2]

In the 1964–65 edition of the "Official Handbook of the National Federation of State and High School Athletic Associations,"[3] it was reported that:

> "Currently, nine states (Alabama, Colorado, Illinois, Montana, New York, Oregon, Utah, Wisconsin and Wyoming) prohibit athletic contests between schools for girls' teams. Nine additional states prohibit basketball tournaments for girls' teams. In contrast, about half of the states encourage some interscholastic contests for girls and the states of Arkansas, Canada (Manitoba, New Brunswick and Saskatchewan), Georgia, Iowa, Louisiana, North Carolina, North Dakota, Oklahoma, South Carolina, Tennessee and Texas have a state championship series in girls' basketball.
>
> "The Kentucky Association sponsors competition in swimming and tennis

(Continued on Page 52.)

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for girls, Oklahoma in softball, and the Saskatchewan Association provides tournaments in badminton, curling, track and field and volleyball. Competition for girls sponsored by the Manitoba Association in several sports parallels that for boys. The girls compete for provincial championships in: badminton (singles and doubles), curling, gymnastics (individual and team), indoor track and field, softball and volleyball.''

Also on the positive side was a news item in the *New York Times*, March 1, 1969, which noted the decision of the State Education Commissioner for New York, James E. Allen, Jr., that high school girls would be allowed to participate with boys in noncontact sports in an experimental program to determine whether such activities are feasible. Doctor Allen noted this action resulted from the request of a seventeen-year-old girl, a student at the Monroe, N.Y. high school, who had asked for a ruling after having been denied permission by local school officials to try out for the high-school tennis team.

There is a need to attempt to define the causes which have prevented women from being permitted the opportunity of realizing their potential in the area of physical activity, both competitively and recreationally.

Are there forces at work which at least interfere with, if not actually prevent, females participation in sports activities? This question will be briefly considered from the social, economic, and biological standpoints.

Social

Socially, the female's lot is succinctly expressed by the German, *Kirche*, *Kucke*, *Kinder*—church, kitchen, children. As long as strict adherence to this stereotype is maintained, females will be completely trapped by the demands of these endeavors. No one would deny the importance of the place of females in these activities. Changes in their character have, however, made each less confining and time consuming than they were in the past. Thus, the modern middle-class female, even if she is married, has children, attends church, and cooks the family meals, may find that there is leisure time in her daily life. Nevertheless, we will need a major social upheaval in order to plan for a nation wherein women participate in athletics to the same extent as men. In brief, we have not made such plans and there is little evidence that our society is seriously considering making them.

Economic

Hanley[1] has, as mentioned previously, pointed out discrepancies in facilities for women's athletic programs as compared to men's. This is not only true for educational systems, but continues throughout the female's life. If, by some miracle, women suddenly began using public and private athletic facilities to even half the extent they are used by men, then the overcrowding would be catastrophic. If women asked their husbands to do domestic chores so they could participate in recreational activities as often as their husbands now do, men would most probably rebel.

Biological

The biological factors are actually minor but, in practice, they pose monumental problems. This is because social systems find it convenient to hide behind myths, superstitions and taboos—particularly those pertaining to the menstrual cycle. For normal women and except during pregnancy, menstruation is a fact of life for a period of approximately thirty-five years. The point is: if menstruation possessed all the dreadful and deadly characteristics which myth and taboo have ascribed to it, then mankind would not have prevailed. Rather than examine the history of the impact of menstrual customs on both sexes, we will comment upon certain physiological considerations when girls and women exercise vigorously.

The following questions are pertinent:

Should females be denied the right to exercise?

Does strenuous physical exercise harm the female at any age, or during and following pregnancy?

Do birth-control pills affect performance?

Does physical performance change during the various phases of the menstrual cycle?

Do female athletes have special problems with respect to injuries?

Does strenuous physical exercise benefit the female in any way?

Should women be denied the right to exercise?

The answer is so obviously "no" that to ask it is an insult only if we forget that women are still treated as second-class citizens despite efforts to ameliorate this condition. We haven't progressed very far from the situation which existed in 1874 when Doctor Mary Jacobi[4] noted that a Doctor Tilt had congratulated the London obstetrical society for its almost unanimous decision that women were not admissible as members "for the profession felt that the verdict really meant that women were not qualified by nature to make good midwifery practitioners; that they were unfit to bear the physical fatigues and mental anxieties of obstetrical practice, at *menstrual periods*, during pregnancy and puerperality; and that it was unfair to society to encourage women to suppose they could fit themselves to assume responsibilities in those formidable obstetric emergencies which too often completely paralyze even men of experience." Concerning this, Doctor Jacobi[4] stated: "There is nothing in the nature of menstruation to imply the necessity, or even the desirability, of rest, for women whose nutrition is really normal."

Gandhi[5] was well aware of the status of women but did not agree that they should be treated as inferiors. He wrote:

> "My opinion is that, just as fundamentally man and woman are one, their problem must be one in essence. The soul in both is the same. The two live the same life, have the same feelings. Each is a complement of the other. The one cannot live without the other's active help.
>
> "But somehow or other man has dominated woman from ages past, and so woman has developed an inferiority complex. She has believed in the truth of man's interested teaching that she is inferior to him. But the seers among men have recognized her equal status . . . ."
>
> "I have suggested . . . that woman is the incarnation of Ahimsa. Ahimsa means infinite love, which again means infinite capacity for suffering."

Does strenuous physical exercise harm the female at any age, or during and following pregnancy?

Indeed, it would be unfortunate for all concerned if exercise were found to be detrimental to obstetrical and gynecological health. Evidence for such harm is lacking. The comprehensive study of Astrand, et al,[6] of both active and post-active championship Swedish girl swimmers is pertinent. Their subjects had swum from 5.6 to 40.4 miles per week while in training. No evidence of gynecological disease was found in the active group. Also, the obstetrical and gynecological history of the post-active swimmer was normal.

Pfeifer[7] studied 107 outstanding German female ex-athletes. He found no difference in their fertility ratio as compared to control subjects, and duration of labor was decreased in the ex-athletes. Erdelyi[8] surveyed 729 Hungarian female athletes and found the incidence of cesarean section was only 50 per cent that of a control group. Bausenwein[9] states that in events of short duration, women have attained their best personal performance and even established Olympic and world records while menstruating. Yet, without presenting data, she contends that exercise during menstruation causes pelvic congestion; and strenuous exercise by younger girls may cause irreparable harm to ovarian function.

Javert[10] has discussed the role of a patient's activities in the occurrence of spontaneous abortion. He quotes Potter as follows:

> "As well stated by Potter, the packaging of the child in utero is such that the tough skin, muscles, and fascia of the abdominal wall, the thick uterine muscle lined by membranes, and the amniotic fluid absorb physical trauma encountered in the daily routine of the mother to protect the growing fetus from ordinary harm."

Javert[10] concluded:

> ". . . that normal physical and mental activity do not predispose to spontaneous abortion. However, violent physical and mental trauma engendered by unexpected accidents are rare but significant factors in abortion."

There is no evidence that strenuous and vigorous physical activity harms the nongravid uterus. McCloy's[29] discussion of Paramore's comparing the protection afforded the uterus to that supplied by the water surrounding an egg in a jar provides an easily duplicated model for demonstrating this principle. As long as the egg is not resting against the wall of the container and the container remains intact, it is not possible to break the egg by hitting the jar.

The type and amount of exercise either indicated or permitted during pregnancy is something each patient, in consultation with her doctor, will have to decide. The patient who has been almost completely sedentary prior to her pregnancy might require a somewhat vigorous fitness program. On the other hand, the highly trained athlete might find it advisable to decrease her exercise schedule.

In a study[26] of eleven normal women, cardiac output and pulse rate were found to be elevated during most of the last two trimesters of pregnancy. Stroke volume progressively decreased during the same period. Cardiac output was investigated in six patients during light exercise (100 k.p.m. per minute) and in five during moderate exercise (200 k.p.m. per minute). In moderate exercise, there was a progressive decline in circulatory response as pregnancy advanced. This was not attributed by the authors to a change in cardiac function, but to peripheral pooling of blood and obstruction to venous return by the large gravid uterus. Following exercise, cardiovascular function returned to resting levels at the same rate during pregnancy as in the postpartum period. To the extent the results of this study[26] could be applied to well-conditioned subjects, it is not surprising to find that championship-level athletes have competed until a few days prior to onset of labor[21] and one Olympic Bronze medalist in swimming competed in the 1952 games during her pregnancy.[22]

Noack[11] investigated ten women who continued their sports activity after delivery. He reported:

> ". . . two retained their physical abilities, and eight clearly increased them. All the women reported that after the birth of the child they had become tougher, more enduring and stronger. It is striking to learn from this survey that everything went smoothly from the obstetrical point of view. The generally short duration of the delivery indicates that the frequently asserted rigidity of the soft parts (Sellheim) is insignificant. Certainly, the seven ruptures of the perineum are above the normal number. It cannot be excluded that the good activity of the abdominal muscles in the sports-trained woman was a disadvantage for the perineum. In spite of the desire to resume sports, breast feeding was apparently carried out for a normal length of time. It is especially significant and noticeable that six of these women won championships after delivery. We would not be able to find thirteen German Champions, three DDR-Champions, three Berlin Champions and two Silver Medals during the Olympic Games of 1948 in our German sports, if these women had not resumed sports after delivery. We believe that this fact deserves attention in interested sports circles. Naturally, our material is small and selected, but the top performances are objective facts which should give food for thought."

Do birth-control pills affect performance?

Concerning this, Thomas[23] wrote in 1967: "Whether or not these hormones have the potential for enhancing or interfering with the quality of an individual's performance by altering strength, coordination, timing, or endurance, is not known." To our knowledge, the subject has not been investigated in athletes. Recently, however, Morris and Udry[24] compared the Pedometer-measured activity of eight women taking birth-control pills with twenty-six who did not. The former walked an average of 4.17 and the latter, 4.86 miles each day. These differences were statistically significant. The authors pointed out, however, that until a prospective study of activity of women before and after taking the pills is done, their data will have to be regarded as presumptive evidence that use of various hormone agents as contraceptives cause women to be less physically active.

Does physical performance change during the various phases of the menstrual cycle?

The occurrence and importance of premenstrual tension and dysmenorrhea have been well documented.[12,13] These symptoms are rarely found to be the cause of disability in top-level athletes. This is explained by the fact that, in most cases, the girl who has severe premenstrual tension or dysmenorrhea would not have been able to train sufficiently to reach the championship level of competition.

The authors, working with Mrs. Barbara Sabasteanski, Olympic team nurse, and Miss Ann Martin, Olympic team trainer, have obtained menstrual-cycle data from Olympic competitors on the U.S. team. A large number of women were questioned during the 1964 and 1968 Summer Olympics; 1967 Pan American Games; and during some of the try-outs for those games. From comparing those data with individual performance records, it is quite clear women do compete actively during all phases of the menstrual cycle, and that Olympic and world records have been set at the time of menstruation as well as throughout the remainder of the cycle.

Do female athletes have special problems with respect to injuries?

Hanley[1] has found from his experience at the Olympics that women have the same types of injuries as men but not with the same frequency.

Women who have breasts of such size as to be physically incumbering will find it difficult to participate in certain sports. Bayne[25] has described a special protective brassiere for athletes.

Does strenuous physical exercise benefit the female in any way?

Hyman[14] notes that coining of the term "physical fitness" in 1907 has been attributed to C. Ward Crampton, M.D. Since that time a widely accepted definition of physical fitness has not been produced. This is unfortunate, but no less so than the fact that we are ill-equipped to quantitate the healthy changes which occur in such intangibles as spirit, will, inner efficiency, and psychic tranquility which occur when persons who were previously sedentary become physically active.

Concerning this, Edholm[28] wrote:

> "We have not yet attempted to answer the question 'How important is it for the individual to exercise his muscles?' Should he be physically fit? Virtually all those who play games or take part in athletics, including swimming, claim that they feel better. And this claim can easily be tested. If you are a sedentary individual, if you are an office-worker and do not take any physical exercise, start a regime of daily exercises. After you have done these exercises for a week or more you will almost certainly experience a sense of well being. The strange thing is that we do not really know what is the basis of this sensation, but it is certainly one justification for the advocates of keeping fit.

An editorialist[16] commenting on the International Symposium on Physical Activity and Cardiovascular Health, held in Toronto on October 11–13, 1966, noted:

> "Does physical activity contribute to cardiovascular health? The conclusion of the recent symposium seems to be a tantalizing cautious, 'Yes.' As Astrand pointed out in his concluding remarks, rigorous scientific proof of the beneficial effects of exercise may take another hundred years of patient investigation, involving many prospective surveys of both 'high-risk' and average subjects. However, those who know the pleasures of a brisk climb on a frosty morning will not demand this rigorous proof. The time to start something which is pleasant and seems likely to improve our health is not 100 years hence, but now."

Another advantage of exercise is to assist in weight control. There is, as shown by Durnin,[17] a tendency for both males and females to gain weight as they grow older. There is good evidence[18,27] that obese women exercise less than nonobese.

An excellent review of energy expenditure required in various activities is available.[19] From those data we find that an average size female, 121 pounds (55 kg.), will need approximately one to two calories per minute while resting or sitting quietly. Exercise may increase the energy required to approximately two to six or more calories per minute, depending upon the activity. Thus, the difference in energy used in sitting as compared to swimming, climbing, or jogging for thirty minutes would be over 100 Calories. The ingestion of 100 calories per day in excess of those required may cause a weight gain of fifty pounds in five years—an increase which could be prevented even while eating the same amount of food if a simple daily exercise program requiring 100 calories of energy above those usually expended should be undertaken.

The effect of even a moderate exercise program in controlling weight and skinfold thickness has been demonstrated by Moody, Kollias and Buskirk.[20]

Conclusion

We have examined the various factors in our society which work to prevent women from having equal opportunities in the area of sports, physical fitness, and recreation. Even though these forces are extremely effective, there is no evidence to indicate their biological rationality.

The time is long past due for acting upon the knowledge that the idea of a sound body in a sound mind applies equally to both sexes. Our social institutions have, to a large extent, ignored this.

Very simply stated—if we wish to attenuate human potential, the certain way to do so will be to continue to treat women as if they alone of all biological creatures do not require physical activity to build and maintain their vigor, strength, and endurance.

REFERENCES

1. **Hanley, D. H.:** "Medical Supervision of the Female Athlete." Paper read at the American Medical Association, Ninth National Conference on the Medical Aspects of Sports, Hotel America, Houston, Texas, November 27, 1967.
2. **Scott, Phebe M. and Ulrich, Celeste:** Commission on Intercollegate Sports for Women. JOHPER, 37: 10, 76, October, 1966.
3. National Federation of State High School Athletic Associations: Official Handbook 1964–65.
4. **Jacobi, Mary Putnam:** The Question of Rest for Women During Menstruation. New York: G. P. Putnam's Sons, 1877.
5. **Gandhi, M. K.:** Woman's Role in Society. Ahmedabad. India: Navajiban Press, First Edition, August, 1959.
6. **Astrand, P.-O., et al:** Girls Swimmers with Special Reference to Respiratory and Circulatory Adaptation and Gynaecological and Psychiatric Aspects. Acta Paediatrica, Supplementum 147, 1963.
7. **Pfeifer, W. A.:** Sportlicher Wettkampf und Geburtsverlauf. Sport und Leibeserziehung, p. 9, 1951. [German]
8. **Erdelyi, G. J.:** "Women in Athletics." in AMA Proceedings of the Second National Conference on the Medical Aspects of Sports, November 27, 1960. Chicago: American Medical Association, 1961.
9. **Bausenwein, I.:** The Woman and Exhibition Sport. Sportarztliche Praxis, 3: 12–19, March, 1960. [German]
10. **Javert, C. T.:** Role of the Patient's Activities in the Occurrence of Spontaneous Abortion. Fertility and Sterility, 11: 550–558, 1960.
11. **Noack, H.:** The Woman's Ability for Achievements in Sports During the Menstrual Cycle. Arzt und Sport, Supplment in Deutsche Medizinische Wochenschrift, 79: 1523–1525, October 8, 1954. [German]
12. **Dalton, Katharina:** The Premenstrual Syndrome. London: William Heinemann Medical Books Limited, 1964.
13. **Coppen, A. and Kessel, N.:** Menstruation and Personality. British Journal of Psychiatry, 109: 711–721, 1963.
14. **Hyman, A. S.:** Obituary of C. Ward Crampton. **JOHPER, 36:** 90, March, 1965.
15. **Harris, H. A.:** Greek Athletes and Athletics. London: Hutchison & Co. (Publishers) Ltd., 1964.
16. Editorial: Physical Activity and Cardiovascular Health. Canadian Medical Association Journal, 96: 1114–1115, April 15, 1967.
17. **Durnin, J. V. G.:** The Change in Body Weight of a Young Adult Human Population After an Interval of 15 Years. Journal of Physiology, 198: 22, June, 1968.
18. **Bullen, Beverly A., et al:** Physical Activity of Obese and Nonobese Adolescent Girls Appraised by Motion Picture Sampling. American Journal of Clinical Nutrition, 14: 211–223, April, 1964.
19. **Durnin, J. V. G. and Passmore, R.:** Energy, Work and Leisure. London: Heinemann Educational Book Ltd., 1967.
20. **Moody, D. L. et al:** The Effect of a

Moderate Exercise Program on Body Weight and Skinfold Thickness in Overweight College Women. Medicine and Science in Sports, 1: 75–80, June, 1969.

21. **Rumpf, E.:** Athletic Championships During Pregnancy. Zentralblatt fur Gynakologie, 74: 870, 1952. [German]

22. Amateur Athletic Union of the United States: Study of the Effect of Athletic Competition on Girls and Women. San Francisco: Pacific Association of the Amateur Athletic Union of the United States, Third Edition, 1960.

23. **Thomas, C. L.:** "Effect of Vigorous Athletic Activity on Women," in American Academy of Orthopaedic Surgeons Symposium on Sports Medicine, Oklahoma City, August, 1967. St. Louis: The C. V. Mosby Company, 1969.

24. **Morris, Naomi and Udry, J. R.:** Depression of Physical Activity by Contraceptive Pills. American Journal of Obstetrics & Gynecology, 104: 1012-1014, August 1, 1969.

25. **Bayne, J. D.:** Pro+Tec Protective Bra. Journal of Sports Medicine and Physical Fitness, 8: 34–35, March, 1968.

26. **Ueland, K., et al:** Maternal Cardiovascular Dynamics: IV. The Influence of Gestational Age on the Maternal Cardiovascular Response to Posture and Exercise. American Journal of Obstetrics & Gynecology, 104: 856–863, July 15, 1969.

27. **Chirico, Anna-Marie and Stunkard, A. J.:** Physical Activity and Human Obesity. New England Journal of Medicine, 263: 935-940, November 10, 1960.

28. **Edholm, O. G.:** The Biology of Work. London: World University Library, 1967.

29. **McCloy, C. H.:** A Study of Landing Shock in Jumping for Women. Arbeitsphysiologie, 5: 100–111, 1931. [German]

Nutrition in the Athlete

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For several years we have been fascinated, charmed, confused, upset, and puzzled by so much of what we hear in regard to the various avenues one can follow when it comes to feeding athletes to gain better performance. I am sure if we asked everyone in the field to write down those things he has heard mentioned in the past to be especially beneficial nutritionally to a particular athletic event, the list would be quite formidable. In November, 1965 when the AMA Committee on Medical Aspects of Sports held its annual meeting a physician from Hawaii told me about an interesting use of various diets, vitamin supplements, and the ways he conditioned his particular group of athletes. Anyone who visits with this man ten minutes quickly picks up his dominating and forceful personality. He exudes confidence. His own personality and forcefulness must have played a much bigger role in his successes than any amount or any particular type of food or vitamin supplement he used. Many programs are as much more *psychological* as physiological.

There has been an increasing amount of scientific work done in this area. We are concerned with some of the more generally accepted and scientifically based information. In the way of background please realize that this pursuit of knowledge is not new. Actually recorded in ancient Greece around 500 B.C. was a tradition that persists in many circles today. It seems prior to this time the traditional diet of athletes was mostly vegetarian and only small amounts of meat were eaten. A trainer, Dromeus of Stymphalus, Greece, in 450 B.C. introduced the meat diet. He felt that since muscle was used so much in athletic endeavor, they could replenish muscle substance by eating more muscle or larger quantities of meat. It happened that his athletes were well endowed people to begin with so when they started eating meat diets and were successful, people put two and two together and got five. Even to this day we still see coaches and proponents of athletic endeavor who swear by the heavy protein or meat dominated diet. It is true that a certain minimal amount of meat or protein is necessary for the maintaining of a positive nitrogen balance and certain amino acids, but this actually should be only a part of a balanced diet and certainly not the dominant part. It is not protein that is burned up in the final analysis, it is glycogen or simple sugars and phosphates. Protein has to be converted to these latter elements, as do fats, but apparently now some *small* amount of fats can be burned directly. In fact, as I will later point out, proteins are actually best avoided as a pre-contest meal, or near the actual contest, as they tend to aggravate the problem of acid in the muscles and system.

It should be noted also that all athletic events do not require the same type of expenditure of energy. There are events that only require a short burst of maximal effort such as shot-put, Javelin throw, high jump, etc. Second are events that require more effort, but also for a shorter period of time, such as dashes and hurdle events. Third are middle distance races such as the mile or two mile. Fourth are events taking more than one hour such as marathon, or a tennis match. As you can see each different type sport will call for different physiological and nutritional requirements. A sport such as football or basketball has components of all four of the above classifications.

As stated above with different amounts of energy being expanded in different ways it is reasonable to assume that there will be different caloric requirements. For instance volley ball takes around three and one-half calories per minute; tennis seven calories per minute; cross country ten and one-half calories per minute; swimming the crawl fourteen calories per minute. Most athletes will need during active training periods somewhere between 3000 and 6000 calories per day to maintain their optimum functioning weight and their optimum performance level. Another common fallacy is the using of standard height and weight charts to try to decide at what weight an athlete should compete. Actually a more accurate method is to try to determine the athlete's lean muscle mass or the composition of his body. We know the obviously obese athlete has a much more difficult time performing in sustained sports because his body has to carry the extra load of fat. But in short time expenditure sports such as shot-put or even in the heavyweight division of wrestling the extra weight may be a slight help if the individual learns to use this to his advantage. A more accurate way to determine the amount of over-fatness would be the use of a skin fold test and waist measurement, and often we see an athlete not change a great deal in weight as he gets in better condition. By working with a good weight program he can proportionately increase the size of muscle and change the composition of his body without changing weight a great deal. In boys of junior and senior high age we must always keep in mind a third factor at work. That is their nutritional requirements *for growth* as well as for normal functions and athletic endeavors. This is important to realize especially in the fields of wrestling and boxing in these younger age groups where a weigh-in regimen is observed.

To put a young, growing, active athlete on a crash-type diet and along with this to dehydrate him and withhold fluids he needs is to be condemned wholeheartedly. Even at the college level I have seen coaches make a shambles of many good wrestlers in this way. During the past six years I have attended the N.C.A.A. national wrestling finals and I believe I can stand in the weigh-in room and pick out those boys who obviously dieted too much and without exception these fellows have fallen by the wayside fairly fast. We always try to determine early what each boy's body composition is and try to have him wrestle at his optimum weight so he can go the entire season and never be more than four to six pounds over his wrestling weight. A boy who is dehydrated extensively and crash diets is not going to do well, especially in tournaments. The coach who encourages this, especially in boys who are growing, may do permanent harm in the way of kidney or liver damage, and does not help his team.

In the sporting events of shorter time duration a person can get his energy requirements from available stores of high energy cretinine phosphate and adenosine triphosphate and on the anaerobic break-down of glycogen to lactic acid. Now this simply means in the shorter events a person doesn't need any great amount of oxygen to help perform the event, but in longer lasting events where an oxygen debt is built up, the ever-increasing importance of a well-conditioned cardio-pulmonary or heart and lung system becomes critical. For instance in the short term events an athlete may rely upon a recovery period to pay back any oxygen debt incurred; in the intermediate lasting events he may rely upon both a steady state and on recovery phase, but in long distance events or continuous activity events a steady state must be maintained to meet the matabolic needs. In the latter case the energy store supplied by the particular foods as well as the physical efficiency of the person are of importance. In terms of efficiency of utilization of oxygen it must be noted that 1 liter of oxygen yields 5 calories if used to burn carbohydrates, but only 4.5 calories if used to burn *protein* or *fat*. This is a *10 per cent difference* in the utilization of oxygen and may be an important factor in competitive performance under certain circumstances, especially longer lasting events, distance races, basketball, football. Another very important factor in regards to *avoiding* protein before events or as a pre-contest meal is concerned with the digestion and metabolism of protein where there is produced a residue of specific acid which can *only* be excreted by the kidneys. Carbon dioxide is the main acid product produced in the metabolism of carbohydrate and fat, and can be blown off via the lungs and excreted by the skin. During exercise effective kidney function ceases, preventing the loss of any acid by this route. The blood is *shunted* around the kidneys and they don't function during violent exercise or stress.

Increased acid in the muscles and system in general account for fatigue, cramps and inability to continue to function, so it is possible to see that the athlete who eats a large steak, eggs, or a protein meal before a contest may expect a little more trouble with fatigue and acidosis than one who keeps food primarily in the carbohydrate family.

There is of course no substitute for training and repetition of the event in practice. Training in itself improves strength, endurance and skill of performance, and increases the physiological efficiency over the untrained state. Compare events—trained swimmers give out on a basketball court and vice-versa. The time for training is not just before the contest or event. Actually it should be recognized by those in charge of pre-season conditioning programs that they should be as long as possible. The good coach will have his boys working out and staying in shape during the summer months long before pre-season practice starts.

Many studies have shown that people do better on at least three meals per day. We have a mandatory rule at our school that no varsity athlete can skip breakfast. This is common habit in America today and one to be condemned especially in the high school athlete. Well controlled studies done on this indicate that academic flunk-outs and athletic failures may be attributed to skipping breakfast, catching a hamburger at noon and eating whatever is left over in the evening. A day-in and day-out diet of this type is quite deficient in what is needed for the growing teen-ager and is a problem today in the general school population as well as among athletes. We have the most over-fed and under-nourished teenagers in the world. They would get a better diet with food for dogs. It has been shown that physical efficiency can be improved with a well-balanced diet of cereals, milk, eggs, breads, meats, vegetables, and proper amounts of fats, and mental alertness also can be helped. Some experiments showed that five smaller meals spaced through the day are even more efficient than three meals per day. If a boy eats three good meals a day and maintains adequate amounts of protein, fat and carbohydrate he should do well. Except for the pre-game or pre-contest meal his diet probably doesn't need to be altered much.

In the endurance events one has to begin to think of the pre-game time as approximately fourty-eight hours prior to the planned contest. In short term events I doubt if nutrition or eating will modify performance in any great way.

In long term events or endurance contests, performance may not be markedly enhanced, but one can avoid impairments such as loose bowels, abdominal cramps, impeded emptying of the stomach, depleted salt stores and inadequate energy supplies. If these latter can be avoided by the athlete he can exert himself more nearly to his full potential. Beginning about forty-eight hours before competition the athlete can modify his diet to offer maximum protection against such mishaps. Irritating or "gassy" foods should be avoided. Roughage and foods which increase stool bulk should be cut down. Salads, oils, spices, alcohol, rough and seedy vegetables should be eliminated. Non-greasy, bland, easily digested food and fluids should be substituted. Our astronauts use a low-residue type diet before their orbits also.

A very critical point is that for forty-eight hours prior to competition the athletes' *work outs should be canceled or markedly curtailed.* This allows his muscles a couple of days to recover from the persistent training he has been doing. It allows that little extra bit of spring or kick to creep into the muscles, ready to burst forth at the moment of challenge. Another very vital reason for tapering off the training program during this period is to allow the liver specifically and the body generally to replete the glycogen (carbohydrate and starch) stores and reserves. An adequate supply of carbohydrate is invaluable in endurance events, first to provide ready calories for work consumption and second to protect against low blood sugar, which, with increased acid, create feelings of marked fatigue. The actual pre-event meal should be consumed at least three to four hours *before* competition. Liquid meals can be consumed up to one and one-half hours to two hours before contest.

The pre-event meal should be easily digestable since the problems of competing on a full stomach are well known. There are several problems incurred here, one is that from a stand point of a keyed up athlete getting ready to compete. Dr. Rose and Dr. Fuenning and their group at Nebraska have pretty well shown the normal digestive processes are markedly altered and much of the traditional pre-contest meal never gets out of the stomach, so it cannot do anything but harm. Fats for this reason should be avoided because they cause a slowing of normal emptying time in the stomach. There are now on the market several well balanced liquid formulas that can go a long way in helping with this problem. A good pre-game meal four hours or so prior to the contest for example could consist of toast (3 or 4 slices) with honey, oatmeal, weak coffee or tea with sugar added, some peaches in heavy syrup and, if the athlete feels he needs more, a liquid diet supplement two hours before contest. I have been working with the latter product for nearly five years and using it in a variety of ways. It can be used by patients with sore throats, fractured jaws, or trouble swallowing; or substituted for regular meal to keep boys on 1200-calorie diet.

It is wise to take some extra salt when sweating is a problem, boullion is a good source of salt but if salt tablets are to be used, they should be taken with the *pre-game meal* and *not just before* the contest as the *salt can irritate the stomach and in some people cause vomiting.*

There is still some debate on use of vitamins in a hard-working athlete and the main bulk of evidence seems to show that possibly the B complex vitamins may be of some value, although if a person is getting a well-balanced diet he probably will only put excess vitamins out in the urine. One group of investigators did feel extra B_1 and B_2 seemed to increase length and speed of nerve reaction. My opinion is that if they give a psychological help, they probably do very little harm.

Never underestimate the psychological implications in all of athletics. Most contests are actually won between the ears and in the heart, not in the stomach or muscles. When you have two well-coached, well-conditioned and properly fed teams of athletes on the field it all boils back down to how much of a price in terms of self-discipline, sacrifice and guts each boy is willing to pay. Remember what Thoreau said: "None are so old as those who have outlived enthusiasm." Be enthusiastic and attack your situations with a positive attitude. You will get more pleasure from your work and be more successful.

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Heat Exhaustion and Prostration

ISAO HARATA, M.D., Surgeon-in-Chief, Yale Department of University Health; Team Physician, Varsity Football; Surgeon to Intercollegiate Athletic Program, Yale University; Author of "The Doctor and the Athlete."

Any discussion of the problem of heat exhaustion and prostration in athletics requires that we first define accurately the two conditions, as they are clinically recognized. First of all, *heat exhaustion* is defined and recognized as a state of overall circulatory collapse of varying degrees of severity, following prolonged exposure to high external temperature and humidity: it is characterized by a shock-like appearance, rapid pulse, rapid respiration, profuse sweating, ashen pallor, and a *progressive loss* of neuromuscular coordination, mumbling incoherence, and an over-all "knocked out" appearance. In contrast, *heat prostration*, otherwise known as "sunstroke," is a condition of catastrophic magnitude, characterized by hyperpyrexia, that is, a progressive rise in body temperature to incredible and quite frequently fatal levels, associated with a complete breakdown of the usual body temperature control mechanisms, hence an absence of sweating, a stuporous, even comatose appearance, and, unlike heat exhaustion, a high skin temperature and flushed appearance, coupled with a rapid pulse.

With these definitions in mind, let us examine their contrasts and their similarities. First of all, heat stroke or heat prostration is usually quite sudden in onset and massive in extent and may or may not be preceded by any symptoms of heat exhaustion. In contrast, heat exhaustion is not a sudden development, but is a series of progressive symptoms which culminates in total disability, yet with all degrees short thereof. Both adverse reactions to environmental heat are directly related to the normal body mechanisms of temperature regulation; heat exhaustion represents degrees of peripheral collapse in striving to maintain these regulatory mechanisms, while heat prostration clearly represents a complete central breakdown thereof.

Therefore, the next matter to be defined is the actual physiological mechanism of temperature regulation, a complex process which manifests itself in several ways. First, peripherally, we have the sweating mechanism, based on the cooling effect of water evaporation from the surface of the skin, but clearly limited by the partial pressure of water vapor, or humidity in the surrounding air, and the actual ability of this cooling to effect the skin surface directly: thus we have the problems secondary to high humidity, lack of air circulation, and heavy, enveloping clothing. A second peripheral mechanism is the simple one of superficial erythema (or "flushing") and the direct vascular radiation of blood heat thereby, again a mechanism limited by heavy clothing, lack of adequate air circulation and high external heat. All these adjustments are, in turn, controlled by a central "thermostat," so to speak, in the brain stem, which, as evidenced in "heat prostration," is also subject to serious breakdown.

With all these varied mechanisms, it would seem that heat exhaustion and prostration should not, under normal circumstances, constitute a major clinical problem, and this is indeed true. Man survives in tropical areas as well as areas, which, at times, could be described as worse than tropical, without an alarming incidence of these clinical entities; he simply moves slowly, stays out of the sun, and naps at midday. However, several specific areas, where these problems are not only well recognized but have led to fatalities, are well-known, one being in the military service and the second in competitive athletics. The common ground in both these instances is easy to see: in both, there is a certain compulsion involved, which makes it necessary that exertion be continued despite environmental circumstances which are clearly unfavorable. In the military service, we have the "tanker," broiling under the tropical sun inside a vehicle whose armored sides are hot enough to inflict first and second degree burns yet, because of combat conditions, he must remain buttoned up: a further example might be the engine room of a Navy destroyer, where running temperatures can rise to above 140 degrees, as in the South Pacific during World War II, yet there remains the urgent necessity for continued exertion under these clearly unfavorable circumstances. Similarly, competitive athletics, particularly football, gives rise to circumstances which demand exertion in the face of comparably unfavorable environmental conditions. This has led to a number of unfortunate fatalities, both on the high school and college level, and therefore deserves a closer look at the necessity of such athletic exertion, surely not as critical as the demands of the military.

Athletic Implications

The demands of competitive football include the absolute necessity for a high degree of skill and over-all conditioning, and this, in turn, demands a vigorous pre-season program which, even now, is too short. Unfortunately, the football season must end before winter snow and ice become predominant throughout the northern part of our country, hence it cannot continue much beyond late November (professional football and its ridiculous fifteen-degrees-below-zero games to the contrary notwithstanding). Hence, to complete a schedule of weekly games totalling nine or ten, the first game must, of necessity, fall in the third week or even the second week of September, displacing any pre-season conditioning into the latter part of the summer, with its heat. Yet, to prepare for a season of football requires contact work, contact work which requires padding and heavy equipment, work which cannot be effectively shortened without a sure increase in injuries as the season progresses. Any adjustments must therefore be based upon this necessity for pre-season contact work in the heat, which, deplorable though it may be, must be accepted as inevitable: the doctor, the coaches, the trainers, and the athletes themselves would doubtless be far better off lying in the sand on some beach during those early September days, but this is clearly impossible! Overall conditioning must be assured by a vigorous program of contact and non-contact work, and every football player is familiar with the torment and pain of those pre-season double-session practices.

Furthermore, as was shown by the British Eighth army in North Africa, as well as by the Afrika Korps, who trained in the hottest and most humid valley of Czechoslovakia prior to shipment to Africa, there is a specific adjustment of the body mechanisms to exertion in high temperatures, an adjustment which takes seven to twenty-one days and is reflected in a unit-wide reduction of overall fluid needs by 30 to 60 per cent, as each man's body adjusts to the "futility" of excessive perspiration. This adjustment we do seek and do obtain in our athletes, and this so-called "heat tolerance" was never better demonstrated than by the superbly-conditioned University of Oklahoma and Southern California football squads, who played in the Los Angeles Coliseum a few years ago in temperatures ranging from 105 to 110° on the field, all without a single instance of heat exhaustion or heat prostration.

Of course, the fact that athletic fatalities have occurred indicates that all is not well, and surely, no athletic demand can justify the death of a single boy. However, these isolated instances are not infrequently related to factors which can be anticipated by a team physician and guarded against. Thus, we have the unfortunate attitude among certain coaches, who feel that any boy who reports back in the fall grossly overweight and "out of shape" represents a direct insult to their sport and is deserving only of the most vicious punishment that can be meted out, that is, extra laps around the field, extra grass-drill after the formal practice session, and a strict limitation of both food and fluid intake! One must also guard against the not-infrequent self-abuse by some enthusiastic young athletes, who feel that they must lose weight in a self-designed, crash program and will wrap themselves in layers of impervious clothing to "sweat off" those pounds, all the while voluntarily limiting themselves on all fluid and food intake and running extra solo laps. In such instances, disaster beckons and must be zealously avoided by the team physician.

A Medical Control Program

With the definitions and the limitations peculiar to athletics well in mind then, let us turn to consideration of a program which will control these problems and keep them under control.

Primary emphasis should be placed on preventive measures, which, if properly applied, will avoid the necessity of any heroic therapeutic measures. Thus, as mentioned above, control of environmental factors must be considered limited under the necessary circumstances of athletic conditioning. Light sleeveless jerseys, (no long socks, no sweat suits, no rubberized "sweaters"); and shorts and T-shirts for all non-contact sessions should be the rule. In this vein, pre-season practice in the cool of the morning or the cool of the evening cannot be considered desirable, unless the first few scheduled games are to be played at night; most football squads simply must be prepared to play the first few games in the heat. Similarly, arbitrary limitations of practice through use of dry and wet-bulb thermometer readings, though desirable on the surface, can only deprive a squad of necessary practice time, under circumstances which may very well duplicate those of the first few games. It might be said that, if cancellation of practice is justifiable, so is cancellation of scheduled games, should said environmental circumstances still apply; but this has neither happened nor is it likely to happen on a college or professional level. Debate as to the logic of playing scheduled games under such adverse circumstances accomplishes nothing, and such must simply be accepted as part of that for which a squad must be prepared.

On the other hand, very direct efforts should be made to assure that locker rooms, living quarters, and eating facilities are air-conditioned or, if this is impossible, are assured of good air circulation to allow the athletes to readjust their body mechanisms prior to another practice session. Certainly, if research, particularly in mid-America, on the problems of heat prostration and heat exhaustion is valid, the most important factor in the development of these conditions is a prolonged 48 to 72 hour exposure to uninterrupted heat without relief. This, by nature in the Northeast, is relieved by cooler evenings. But in the South, Midwest, and Southwest, should be relieved by artificial means.

Just as important should be a blanket policy on enteric salt, at least two enteric pills per practice session, or four a day for every participant during double-sessions, with an increase in dosage in those athletes who tend to perspire profusely at all times. Salt loss must be anticipated and adequately replaced. Failure to do so is fraught with danger inexcuseable!

Fluid intake should be unlimited and encouraged. The old-style prohibition of all water on-the-field is barbaric. Such Spartan measures should be replaced by a more reasonable provision of fluid, both on the practice field and in games, in quantities which are available as desired. The old-time fears that a squad, provided with unlimited fluid will founder, like horses, have been proven groundless. Our athletes are not animals, hence do not overdrink. There is also considerable debate as to the true efficacy of added salt in this water: it is my belief that an amount of salt in the water, sufficient to be of therapeutic value, will render the water unpalatable for a majority of the squad, thereby limiting overall fluid intake dangerously. Of course, the widely publicized "Gatorade" has been hailed as the answer to all heat problems, representing, as it does, a compendium of virtually all the chemical components of sweat in a solution which is then flavored with citrus derivatives to disguise the taste! Our experience has been that those who like it, like it very much, while those who dislike it, dislike it intensely. Since we have no means of forcing our athletes to do that which they do not wish to do, we cannot force them to take this specific form of fluid nor do we attempt to do so. Instead, we recommend enteric salt, offer water on-the-field, and provide iced "Coca-Cola," as well as "Gatorade," in the field house after each practice. The consumption of the former is understandably enormous and the enthusiasm for it is incredible, indeed almost frightening!

Most important of all, we demand and maintain an accurate weight chart, on which each squad member records his weight at the beginning and the end of each practice session, morning and afternoon. This weight chart is our most valuable tool in spotting any potential problem from either cumulative dehydration or approaching heat exhaustion. Thus, weight losses of ten to fifteen pounds are not unusual, particularly in our larger athletes at the beginning of our daily practice sessions, but this tapers to five to seven pounds after the first week. A persistent loss of more than this after the first week is suspect. In addition, the returning pre-practice weight is carefully checked against each preceding post-practice weight loss. Incredible though it may seem, ten to fifteen pound weight losses are easily made up by the subsequent practice session in almost every case, and, in those in whom this does not occur, we have our potential problem accurately spotted. In much the same way, an overall weight loss in the entire squad after a succession of hot days, together with an observable "loginess" and lack of energy can be easily detected, once alerted by the weight chart. Any necessary or desirable adjustments in the practice schedule can then be made in concert with the coaching staff.

This brings us to the most important aspect of our preventive program, that is, an alert coaching staff which has been "clued-in" on all the symptoms of beginning heat exhaustion. For example, any slowing of reaction time, comprehension, dulling of affect, or loss of fine coordination should arouse immediate suspicion, and the alert coaches then direct such a suspect from the practice area to our side-line post. Here the head trainer and myself place the boy in the supine position in the shade, loosen his clothes, and bar all further activity until full recovery of all energy and personality characteristics has occurred, no matter how long this may take. With ourselves watching each potential problem, as indicated by the weight charts, and with the coaches alert to significant early symptoms, we have never, in fourteen years, had a single instance of heat prostration nor have we ever had an instance of heat exhaustion that required more than fifteen to thirty minutes rest in the shade.

With a preventive program such as outlined above there is little need for concern over the classical treatment of either heat exhaustion or heat prostration, since it is highly unlikely that either will be encountered. Parenteral salt solution, overall environmental cooling, bed-rest, close hospital observation, and the like, for serious heat exhaustion will hardly be found necessary, and the application of total-body hypothermia for the classic, life-threatening heat prostration will, hopefully, never be necessary. Instead, treatment, as outlined above for the earliest signs of heat exhaustion, has always sufficed.

Summary

Heat prostration and heat exhaustion have been described, compared, and related to one another. The compromises necessary within the athletic sphere, particularly in football, have been pointed out and a preventive program, which we have found useful and effective, has been outlined in all its points. It is a simple program, makes sense physiologically, and most important, it works!

Rehabilitation of the Injured

ISAO HARATA, M.D.,

Before attempting to enter into any discussion of rehabilitation in athletics, it is essential that certain qualifications and limitations be firmly established at the very outset, in order to present a relevant body of material in the brief time allotted: without such qualifications, certain clinical applications might emerge which, in an average practice, would be questionable, if not downright dangerous.

To begin with, it is pivotal that my specific position at Yale University be strictly defined. Thus, I am surgeon-in-chief of the Yale Department of University Health, as well as surgeon to the entire intercollegiate athletic program, and, finally, team physician to varsity football. These positions should be kept in mind, not for vanity's sake, but to underline the essential responsibility and administrative control necessary in an organized athletic treatment and rehabilitation program, a factor to which we will return again and again.

It is also important that the entire medical program for our inter-collegiate athletes be summarized, to define, again, the limits within which we work, and to sharply differentiate techniques and therapeutic regimes which, in any other context, would be justifiably considered impossible. Our program is so set up, that, during the football season, our head trainer and myself hold regular clinic hours every morning, including Sundays, and are present throughout every afternoon practice session and every contest. At the same time, we are available, in those same hours, to all the other varsity athletic programs which are simultaneously underway, for example, cross-country track, soccer, and early pre-season hockey and basketball. At the conclusion of the football season, we discontinue our Sunday clinics, since these are principally devoted to early follow-up of injuries received during our scheduled Saturday football contests, but we maintain our regular weekday morning hours, hours which are specifically selected to allow all students to come in for examination and evaluation either before, after, or between classes: immediately available during these same morning hours are X-ray service, physical therapy, and consultation within all sub-specialties including orthopedics. From this brief summary, it can be readily appreciated that our injured athletes are seen not only daily, but often twice daily as indicated, at which time dressings are changed, adhesive strappings adjusted, and injuries re-examined and re-evaluated in the light of varying activity levels. The result is a very close control over each injured athlete, control which is further reinforced by specific directives to any and all coaches and sports involved, to assure maximum cooperation at all times.

Needless to say, such control is only as strong as its weakest link, the athlete himself, and can only be maintained through his personal confidence in the overall program, combined with the strictest discipline and cooperation, a combination which, fortunately, we have been able to establish with few exceptions. For such minute-to-minute control is absolutely essential in order to best apply those principles and methods that, as stated at the outset, would be virtually inapplicable, and in fact, down-right dangerous under any other set of conditions.

Principles of Treatment

First of all, it is important that all of us recognize that athletic injuries, per se, are not the same as the traumatic problems which all of us have seen and are seeing in our everyday clinical practice. The occasional broken leg, fractured clavicle, dislocated shoulder, and other similar major injuries are fortunately quite rare overall, constituting no more than 5 to 10 per cent of the total disability hours and days of any single squad throughout a competitive season. Such major injuries as these, despite the belief of most doctors, are not a significant problem in any controlled program, simply because these are injuries which require clinical methods which have been established since time immemorial and are medically identical to injuries suffered from auto accidents, falling down-stairs, or any other of the more common mechanisms seen in everyday life. In fact, within the athletic business, we do not consider a major dislocation or major fracture to be a significant problem in the truest sense: diagnosis is simple, disposition and treatment are clear cut, and the period of disability is measured in weeks or months, hence is, more often than not, such that the athlete cannot be expected to return within the same competitive season.

On the other hand, the remaining 95 per cent of injuries are equally crippling to the athlete involved, for such time in days as he remains disabled. Herein lies the true challenge to athletic medicine, namely THE EARLIEST POSSIBLE RETURN TO FULL COMPETITION OF ANY ATHLETE, WITHOUT AT ANY TIME JEOPARDIZING AN OPTIMUM RESOLUTION OF HIS INJURY. For example, it might be said that a halfback with a sprained ankle, (which might force anyone of us to limp about for a week or two, but would neither effect our earning power nor our social responsibilities), is, in truth, a completely crippled and useless athlete for every day his symptoms last. By the same token, a pitcher, whose shoulder is sore only when he throws an overhand fast ball and is otherwise completely asymptomatic, is, to all intents and purposes, as thoroughly crippled as he would be with his arm broken, for just so long as his disability persists.

It is also important to emphasize the different time-span within which we work, as opposed to normal clinical practice. All injuries are seen virtually immediately or within seconds thereof, presenting therewith an entirely different picture than is seen in an average hospital emergency room or in average clinical practice. Together with this advantage, however, there is the incessant demand for a very accurate, on-the-spot diagnosis, for immediate and direct treatment based thereon, as well as for an accurate prognostication of disability under said optimum treatment: these demands must be met unerringly, not only for the good of the athlete, but also for the coach's own tactical planning, not to mention the edification of the daily press and the associated and constant criticism by newspaper-reading doctors.

Finally, it is important to emphasize that certain general treatment principles have been adopted over the years as applicable to virtually all injuries as they are seen on the playing field, which treatment principles are based on a definition of injury that we have found to be quite useful within this area. Thus, we look upon injury as a traumatic disruption of tissue continuity, to a greater or lesser degree, and accompanied by a degree of bleeding, hence swelling, which is proportional to the type of tissue involved and the extent of injury, but not necessarily directly proportional to both. Our first interest is to stop the bleeding which is an inevitable accompaniment to an acute injury, and for this we use immediate ice, compression, and elevation. This regime we continue, together with whatever immobilization or support is necessary for the type of injury, until we are sure that bleeding has not only subsided, but has definitely stopped, a period lasting from twenty-four to forty-eight hours depending upon the type of tissue involved. During this period of hemostasis, we repeatedly examine the injury by palpation and inspection until we are certain the swelling has peaked and has begun to absorb. Only then do we begin progressive active rehabilitation, always supporting the injury to prevent reaggravation and bleeding. Such an approach, when properly timed, will result in an acceleration of resorption rather than an increase in swelling, and this reaction has been uniform throughout our experience, without the need for external modalities such as diathermy, whirlpool, ultrasonic or any other physical therapy methods.

This regimen is considered heresy by many, who are in the habit of taking an acute injury and simply referring it to physical therapy for whatever modality might be considered convenient at the time: with local massage, infra-red, diathermy, whirlpool, and even ultrasonic being used helter-skelter or in rapid succession, it is not unusual to see a brawny, acutely-tender induration develop that completely replaces the soft swelling of the initial phase, induration and soreness which can, at times, persist for two to three weeks thereafter.

In contrast, gentle active rehabilitation carried to tolerance in a program carefully tailored to each individual, his personality, his pain threshold, the demands of his sport, and his injury, all under the strictest control and observation at all times, has, in our hands, proved to be of the greatest advantage, with very rapid resorption of swelling, very rapid subsidence of local tenderness, and a concomitant increase in strength in all movements. Each program is devised to restore motion, then function, then strength, to an injured part in that order, by a series of progressive stages that are carried to tolerance. Each individual must be fitted to a specific series of graded exercises that place a controllable degree of increasing stress on the injured part, never exceeding the athlete's own pain-threshold. For it is our conviction, confirmed by experience, that no injury will be adversely affected, just so long as tolerance to local motion is never exceeded: once the athlete is convinced that he cannot hurt himself within this limit, the beneficial effect of early active rehabilitation can be uniformly striking.

Which brings us to the crux of the program! Can one depend upon individual pain-thresholds and their well-recognized variation from person to person to protect each athlete from compounding his injury under this regime? Here again, we must emphasize the absolute necessity for direct and constant supervision, coupled with a detailed knowledge of the individual personality, motivation, and pain-threshold of each injured athlete. In average clinical practice, such direct knowledge and constant supervision is beyond the realm of possibility. Yet, in a total program such as ours, this detailed knowledge of every athlete is a routine part of the overall job. Hence we are able to create an individual rehabilitation regime that takes all these variables into consideration from the moment of injury to the moment of full competition. We know which boys are crybabies, which boys are "gung-ho hard heads," which boys really want to get well, and which boys don't honestly care. We know which coaches of what sport are more unreasonable in their demands, and know just what routine competition amounts to in every sport. We can, therefore, apply the principles above and reap the benefit in a way that no one, not even ourselves, can hope to initiate or accomplish with the usual injured office patient.

Of course, such a program requires very careful, repeated re-evaluation at all times, with modification of the progressive demands from moment-to-moment depending on the response of the patient, modification not only from treatment to treatment, but also within each projected treatment period, hence necessitating a daily, sometimes twice-daily, inspection of physical findings and function throughout the recovery period. It is, therefore, extremely demanding in time and effort, and certainly could not be applied in our hands without the absolutely irreplaceable function of our head trainer, Mr. O. W. Dayton, generally accepted as one of the best in the business and a true expert in active rehabilitation methods within the athletic sphere. Working together, we are able not only to control and devise multiple ongoing rehabilitation programs but are simultaneously able to predict, to the day, the anticipated return to full action of any of our injured athletes. The advantages of such a clinical approach are myriad, but can be divided into four main categories. First, overall athletic condition is maintained throughout the period of disability, simply by including, within the regime, exercises to all other parts of the body aside from the injured part, thus allowing recovery from injury and top overall condition to coincide. Second, the athlete does not have to wait five days or a week to see his private specialist again, but can return to full activity on the very day, in fact the very moment he is ready. Third, every succeeding step of his rehabilitation takes place under direct visual supervision; we can immediately correct an unconscious limp, or some other poor mechanical or psychological adjustment to the increased motion of an injured part, as well as provide a constant verbal encouragement to the laboring athlete. Last, a very important aspect of such a program is the fact that, instead of retiring to his room or to some physical therapy area remote from the rest of the squad, the injured athlete remains very much a part of the team, does his rehabilitation directly on the practice field and, should any written or oral material be presented to the remainder of the squad, he can immediately rejoin his teammates for the necessary interval, prior to returning to his own regulated program. He thus remains an active member of the squad, rather than a forgotten injury whom no-one remembers!

Illustrations

To illustrate the actual methods used, let us first take the classic sprained ankle, negative to X-ray and moderately painful, with which the athlete himself initially feels he can continue to participate, but which rapidly becomes intolerable. Examination reveals an acutely tender area at the very spot of ligament strain, possibly accompanied by a beginning area of bleeding in that exact same spot, which within five minutes can become quite considerable. Immediate treatment includes ice, compression, elevation, following which the ankle is strapped to provide immobilization and the extremity placed at rest, with crutches if pain is severe. With the use of ice, pain rapidly becomes less of a problem and ice is maintained for approximately thirty-six hours, until it is clear that no further swelling has occurred and that bleeding has definitely stopped. At this point, a more-encircling type of adhesive-strapping is applied to control undesirable eversion and inversion, and the patient is started on a walking regime, with careful supervision to avoid the external rotation which is the usual reaction of anyone with a sprained ankle. By emphasizing restoration of the hinge motion to the ankle, a surprising resolution of the swelling can occur within twenty-four hours thereafter, and, as soon as walking is normal, light jogging is started, as tolerated. As soon as jogging can be tolerated, sprinting is begun, following which a serpentine running-pattern is established, capped by sharp cutting in both directions at full speed. At this point, following some self-controlled work against the bucker and blocking-sled, the athlete is pronounced ready to return to full duty. Using this graduated approach, the usual type of sprained ankle can be predictably returned to full competitive activity in three to five days, the more severe ones possibly in seven to ten days.

As another illustration, let us take the common knee-ligament strain, minor in magnitude yet crippling for so long as it remains symptomatic; for example, an abduction strain of the medial-collateral-ligament of the knee, without any instability and with very minimal effusion. With no evidence of any other injury within the joint and a sore and acutely painful medial-collateral-ligament along its entire length, there is no question of surgery, but rather, a matter of proper resumption of full activity as soon as function can be restored. This is accomplished by means of, again, ice, compression and elevation for twenty-four to forty-eight hours, following which, motion is begun with an adhesive tape support to prevent further abduction of the knee. This program consists, again, of first walking without a visible limp, then jogging as-tolerated, followed by sprinting as-tolerated, followed by serpentine-running, and lastly, by sharp cutting, with a program of quadriceps weight-lifting added on the seventh to ninth day. During this entire period, the knee is repeatedly examined for any evidence of aggravation, which, should it emerge, demands immediately modification of the rehabilitation program, hence the absolute necessity of meticulous daily supervision and control. Surprisingly enough, without the use of any modality other than the patient's own body heat and activity, such an injury as this can be rendered painless, completely functional, and with full strength within five to seven days. During this same five to seven days, the athlete will pass through predictable periods of skepticism, elation, then disappointment, finally followed by the ultimate development of full confidence, each stage coinciding with his degree of recovery. This predictable, staged psychological recovery is as indispensable as his physical recovery, underlining again the need for constant daily supervision and constant daily encouragement.

Summary

A broad statement of principles in the active rehabilitation of the injured athlete has been presented, emphasizing the context within which such a program can be made to function, but with a word of caution for any such application without an equivalent degree of control at all times. With such control, both day-to-day and minute-to-minute, results from a logical program of planned progressive rehabilitation can, in fact, produce what appear to be miracles in prompt restoration to full athletic activity.

Training Room Facilities

CHARLES E. MEDLAR, Head Trainer, Pennsylvania State University; Trainer, U.S. Olympic Team

In accordance with the greatly improved standards, requirements, and recognition of the athletic training profession most colleges and universities with an extensive athletic program have excellent and much-needed training room facilities. New training rooms have been constructed and others improved in the athletic plants of many colleges and universities.

Unfortunately, adequate training rooms and training room facilities are lacking in many high school athletic programs.

The hygiene and sanitation of a desirable training room is quite basic. Many times locker rooms are sorely neglected and appear to be a shambles. It should be impressed on the athletes that they are responsible for the care of these facilities. Many times it takes an outbreak of staph infection, for example, before steps are taken to correct the situation.

The training room area either for a large or small institution should be a room separated from the locker rooms and showers. However, since it is designed to provide efficient service to large numbers of athletes, if possible it should be immediately adjacent to the locker room so that it is readily accessible to the athlete. The location should be arranged that it is not used for a passageway.

The room should be well lighted and ventilated. Ideally, it should have both artificial and natural light. An outside wall is desirable so that windows may be utilized for ventilation and light. The windows should be placed high to save wall space which can be otherwise utilized. Frosted glass may be used to insure privacy.

A ventilating fan is quite important. It forces stale air out of the training room and also eliminates excessive moisture and offensive odors. If it cannot be provided in a wall, it may be installed in a window. Even a small electric fan set in a window will help.

Concrete or tile floors are recommended. Painting closes the pores of the concrete and makes it easier to clean. Several floor drains should be located near water outlets. Rubber mats over the work areas reduce fatigue and slipping but must be kept thoroughly cleaned. For the sake of hygiene the floors should be cleaned thoroughly with a good commercial cleaning preparation at least once daily. The cleaning preparation should have a high anti-bacteria effect.

Tile or cement walls are preferable as they may be easily cleaned and disinfected. If a complete tile is not possible from a cost point of view a three-foot wainscoating of tile can be used as a minimum. Light colors are recommended to make the room bright and cheerful. The walls should be waterproofed. Woodwork should be covered with a glossy paint for each in cleaning. Furniture, should be light in color.

All tables should be covered with an impervious material for more efficient cleaning and sanitizing. All counters should have metal or plastic tops or well-painted enamel on wood with a minimum of crevices which may collect contaminated material. All tables should be cleansed with a good germicidal solution regularly. Counter tops where tape and other materials are stored should be kept clean of debris and cleaned regularly with an antiseptic solution.

There is nothing that will slow a team down so quickly as the rapid spread of infections. These affect the performance of an athlete tremendously. This is true whether it be a generalized infection or one of the many skin infections to which the athlete is subject. Simple precautionary measures are a small price to pay to make an effort to prevent the spread from one athlete to another of a superficial infection.

The trainer whether in high school, junior college, college, or the professional ranks, should make every attempt to keep his equipment clean, including all physical therapy modalities. Of prime importance for a good athletic training program is a clean training room.

Included in the training room, if at all possible, should be a separate room for the use of the team physician. If a separate room is not available, a section of the training room should be available for the team physician. An examining table, a locked cabinet for surgical equipment, pharmaceutical supplies, and medical records, and an examining chair are some of the minimum essentials in this area.

Adequate storage space for supplies is essential and access to these storage facilities should be carefully controlled. No one should be allowed into the storage spaces without authorization. In addition to cutting down on supply bills the danger that might arise from improper use of supplies is avoided.

For the physical arrangement of a training room, if at all possible, the trainers and the team physicians should be able to see what is being done in all parts of the room. The view should not be obstructed by cabinets or other tall equipment in the center of the room. Such equipment is arranged along the walls. If a separate room is used for hydrotherapy a glass window should be constructed between this room and the main training room.

The equipment in the training room

should be arranged to form aisles for channeling of traffic. Working space around the tables, workbench and cabinets should be arranged with an unobstructed area. Storage for regularly used supplies and equipment should be provided at the site of use. For example, a supply cabinet equipped with a work counter close to the tables that are used for taping and for the preparation of bandages and dressings is helpful. If any equipment for reconditioning exercises after injury is used, this equipment should be located near the tables where it is to be used.

Electrical plug outlets should be three to four feet off the floor. Every effort should be made to balance these outlets on different circuits. If any equipment needs to be grounded, this is a must. Allow for as many outlets as possible.

The training room must have an adequate supply of hot and cold water. Outlets for at least one sink, preferably a double sink, should be provided. An outlet with hot and cold water with a hose attachment is necessary for a whirlpool bath.

The training tables should be made of a heavy material. They can be made out of wood in the school's manual training shop. An average height is 30″ from the floor. A length of six feet, six inches, and width of twenty-six inches is best. For the tables used for taping, a back rest at one end of the table or a table that can be elevated at one end is advantageous. The tables should be covered with a material that is easily cleaned, ideally foam rubber pads. However, for the sake of economy, the tables could be first covered with blankets over which oil cloth or some other water-proof material which can be easily cleaned is placed. Clean sheets can be placed over this covering. This material and the sheets can be held in place by strips of adhesive tape fastened under the edges of the table. This is an economical procedure.

A section should be set off for the use of any powder or the application of any tuf-skin, benzoine, and the like. In this section can be placed jars with brushes, powders, foot rests, a bench, spray cans, and electric hair clippers. This eliminates the scattering of the powder, excessive hair, and sprays around the training room.

Large waste receptacles should be made available especially in the areas where bandages and tape are removed. A towel hanger should be placed within the training room for the disposal of soiled and wet towels. A weight scale is a necessity.

More colleges and universities are using air conditioning in the training rooms. Also included in many training rooms is a steam room or sauna bath. These facilities usually are beyond the realm of most high school budgets and some college budgets.

There is, naturally, an ideally constructed and equipped training room, but it is not possible for all schools and colleges to attain this ideal. Therefore, the construction and equipment placed in the training room must be commensurate with the budget that is available.

In regard to physical therapy modalities available for use in the training room, again this is governed by the school budget.

With the fine results that are being attained by the extensive use of cold and cold applications, the availability of ice or some means of applying cold compresses is important. Ideally, an ice making machine should be available. A substitute for this can be a second-hand refrigerator, a large cooler, or even a gallon thermos jug or a portable cooler. With the increased use of ice massage, a refrigerator with a freezing compartment is very helpful. In the freezing compartment, water can be frozen in paper cups to be used for the ice massage. Any means of applying cold is essential.

A hydrocollator for moist heat packs is economical. These hot packs allow you to bring the best heat to the patient. The heat can be localized more readily than with the use of a whirlpool and it can be applied to areas which cannot be readily reached with a whirlpool.

Many schools can now afford a whirlpool bath and it is certainly advantageous. However, it must not be used indiscriminately. It can be used also for the application of cold. Use of cold water in the whirlpool can be advantageous.

The construction of a foot tub with a hot and cold water inlet and drain can be done rather economically. This can be used for hot or cold treatment. Cheap plastic tubs can be used for contrast baths. Even a plain, ordinary bathtub can be used as a source for moist heat. No school budget is so meager that it cannot include a heat lamp or infra-red lamp.

After these come the other modalities such as diathermy, microtherm, vibrators, muscle stimulators, and ultrasound. However, sometimes too many modalities are used. They should not be abused.

No athlete should be allowed to use any of these modalities by himself except possibly the application of cold. They cannot be expected to use good judgment in their use.

Other supplies can be divided into two main types, chemical and nonchemical. These should be selected by the team physician and trainer so I will not specifically mention these. The choice is also dependent on the budget. One statement in reference to the choice of chemical supplies: antiseptics are not substitutes for soap and water. They may act as deterrents to germ growth at the expense of damaging tissue and act as destroyers of the vital processes they are supposed to protect. Often too many antiseptics are available.

Athletic Injury Release of Information Guidelines

The Judicial Council of the American Medical Association offers good advice to physicians who are involved in the treatment of injuries to athletes and who are confronted by representatives of the new media seeking information regarding the injuries.

According to an official opinion of the council, "A patient or responsible friend or relative may authorize a doctor to disclose certain health information to the press. Under these conditions, the release of information by the physician does not violate any ethical principle. However, a doctor may release only authorized information or that which is public knowledge."

The statement is cited as a good legal as well as ethical guide. Legally, a physician may release only that information which is public knowledge or information authorized by the patient.

PENNSYLVANIA MEDICINE cardiovascular briefs

Post-Infarction Convalescence Program Part II

Irving Imber, M.D. questions William G. Leaman, Jr., M.D., Fellow, Council on Clinical Cardiology, Unionville, Pennsylvania.

Should the post-infarction patient be permitted the use of alcoholic beverages?

I do not believe that strong alcoholic drinks are vasodilators. However, in reasonable amounts alcohol tends to relax the patient and may be useful for this effect. The decision here will depend on the patient's previous habits.

Is smoking allowed?

There is still considerable controversy regarding the role of cigarette smoking in coronary disease. Therefore, until we have a more definitive answer, I believe we should be flexible and perhaps allow smoking in moderation after we have given careful consideration to the patient's previous smoking habits. In my opinion, if tobacco builds up the confidence and strengthens the optimism of an elderly patient who has been a previous smoker, allow its use. In fact, a cigarette at the end of the day to combat imsomnia may prove far better than the routine use of a sedative. Naturally, the patient who has advancing heart failure should not smoke. The same pertains when tobacco produces a distressing cough, dyspnea or chest pain.

Will smoking predispose to another myocardial infarction?

I do not believe so. I would not encourage an excessive use of tobacco (such as forty cigarettes a day), but, on the other hand, I would not admit that a moderate use of tobacco in itself might precipitate another myocardial infarction even when coronary atherosclerosis is present.

What is your opinion regarding air travel when a patient is convalescing from a myocardial infarction?

It seems unreasonable to prevent these patients from travelling by air after they have shown a smooth, uncomplicated convalescence. The atmospheric pressure in the aircraft these days is invariably stabilized. This, of course, applies to the patients who have shown good progress for a period of six to eight weeks following a myocardial infarction. The main problem for the physician is to instruct the patient regarding activities in the event the plane is bound for a high altitude vacation spot, such as Colorado Springs or Mexico City.

What are your thoughts regarding the best vacation climate for a patient convalescing from an acute myocardial infarction?

A warm climate is beneficial. Hot and humid climates should be avoided. The physician should be constantly aware of the vacation sites these patients choose. Air conditioning, now generally available, is perhaps the best atmosphere for the post-infarction patient. Activities, of course, should be suitably restricted in cold climates. The main vacation period of the coronary patient during the first post-infarction year should be not less than three consecutive weeks.

What is the value of an avocation for these patients?

If the patient already has a suitable avocation (within the limits of exercise tolerance), encourage it. If not, it is helpful to seek one. The main effects of an avocation are to give the patient pleasure and to promote relaxation.

Do you recommend the use of long-term anti-coagulant therapy?

Although the long-term use of anti-coagulants has been recommended for about two decades, the efficiency of such a program still remains in doubt. In fact, it may lead to a fatal hemorrhage. G-I tract and renal bleeding are most common, and instances of hemopericardium and intra-pleural bleeding have been reported. Often serious bleeding may occur even though the prothrombin activity has been well within the therapeutic range. Of most importance, long-term studies (after five years) show that the death rate is essentially the same in patients taking an anti-coagulant drug as in those untreated by anti-coagulants. There are also a number of medical factors in all the collected cases which, in themselves, could prevent long survival: for example, congestive heart failure, cardiac enlargement, dysrhythmias, diabetes mellitus, hypertension, multiple infarcts, etc. These, together with the social and psychological factors present in any series defy an accurate assessment and cannot be considered in any statistical analysis. In other words, the case either for or against the use of anti-coagulants is far from settled. Personally, I prefer not to recommend the *routine* use of long-term therapy of this type.

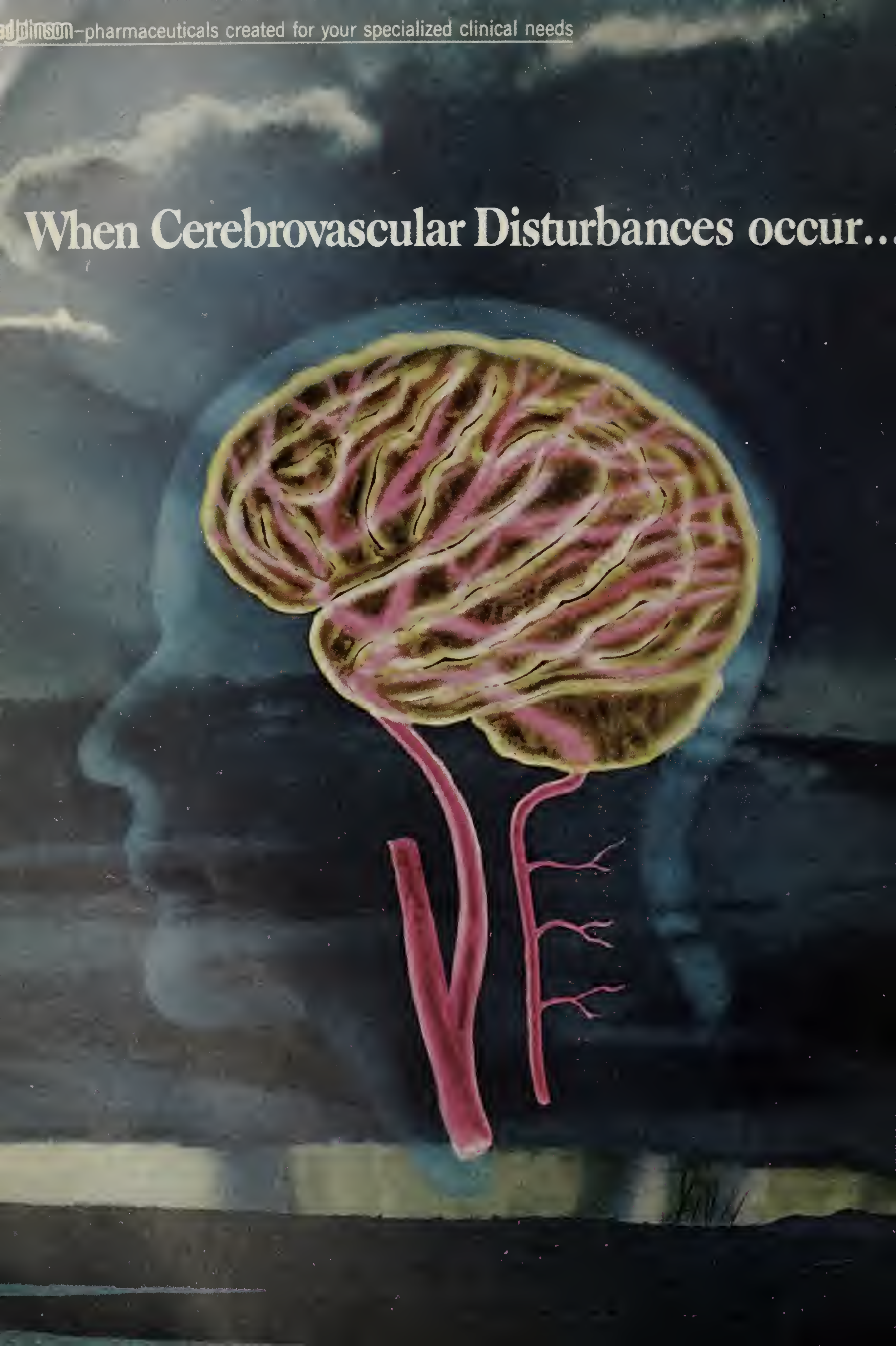
This Brief is prepared by William G. Leaman, Jr., M.D. for the Council on Education and Science, in cooperation with the Pennsylvania Heart Association.

Any way you look at it, buying U.S. Savings Bonds makes sense.

They not only get the kids ready for college.

They keep the colleges ready for the kids.

You get a little over $4 for every $3 you invest.


adJohnson–pharmaceuticals created for your specialized clinical needs
When Cerebrovascular Disturbances occur…

...with episodes of vertigo, headache, confusion, sensory loss, slurred speech, consider

VASODĪLAN®

(ISOXSUPRINE HCl)

to help relieve symptoms by preventing vasospasm and increasing cerebral blood flow

New 20 mg. strength now available: Vasodilan 20 mg. tablets for greater dosage simplicity and convenience. Recommended *initial* dose: one 20 mg. tablet q.i.d.

hough not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of
xsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]
ications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease),
naud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic).
nposition: VASODĪLAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications**
Cautions: There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial
eding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10
or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not
ommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Fazekas,
.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton,
., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192
e) 1960. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. *4*:124-128 (April) 1962. (5) Whittier, J. R.: Angiology
2-87 (Feb.) 1964. © 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 75970

Mead Johnson
LABORATORIES

PENNSYLVANIA MEDICINE cancer forum

Program of the Annual Meeting of the Wainwright Tumor Clinic Association

Wednesday, May 13, 1970
at the
Hospital of the University of Pennsylvania
3400 Spruce Street, Philadelphia, Pennsylvania 19104

Horatio T. Enterline, M.D., President, Presiding

8:30 a.m. REGISTRATION

9:00 a.m. Welcome

9:05 a.m. "Uses and Abuses of Tumor Registries"
Mr. Abraham Ringel, Public Health Analyst, Operations Research and Systems Analysis Branch, Division of Regional Medical Programs, Department of Health, Education and Welfare, Bethesda, Maryland

9:35 a.m. "Experience with Computerized Tumor Registries"
Charles R. Smart, M. D., Director, Rocky Mountain States Cooperative Tumor Registry; Division Chief, General Surgery, Latter Day Saints Hospital; Associate Clinical Professor of Surgery, University of Utah Medical School, Salt Lake City, Utah

10:05 a.m. "Regionalization Program of the American College of Radiology"
Antolin Raventos, M. D., Professor of Radiology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania—10:35 a.m. Coffee Break

11:00 a.m. Discussion

12:00 Noon LUNCHEON

1:30 p.m. "Adjuvant Therapy for Breast Cancer"
Robert G. Ravdin, M. D., Professor of Surgery, University of Pennsylvania School of Medicine, and Associate Director, Neoplastic Chemotherapy Clinic, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania

2:00 p.m. "Studies on Fetal Antigens in Intestinal Carcinomas"
Robert W. Crichlow, M. D., Assistant Professor of Surgery, University of Pennsylvania School of Medicine, and Associate Director, Neoplastic Chemotherapy Clinic, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania

2:30 p.m. "Possible Relation of Epstein-Barr Virus to Burkitt's Lymphoma and Nasopharyngeal Carcinomas"
Werner Henle, M. D., Professor of Virology in Pediatrics, University of Pennsylvania School of Medicine and Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

3:00 p.m. "Current Trends in the Radiotherapy of Hodgkin's Disease"
Walter Eaton, M. D., Assistant Professor of Radiology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania

3:30 p.m. ANNUAL BUSINESS MEETING

4:00 p.m. ADJOURNMENT

First, there were tranquilizers for anxiety

Then, there were antidepressants for depression

1969, PFIZER

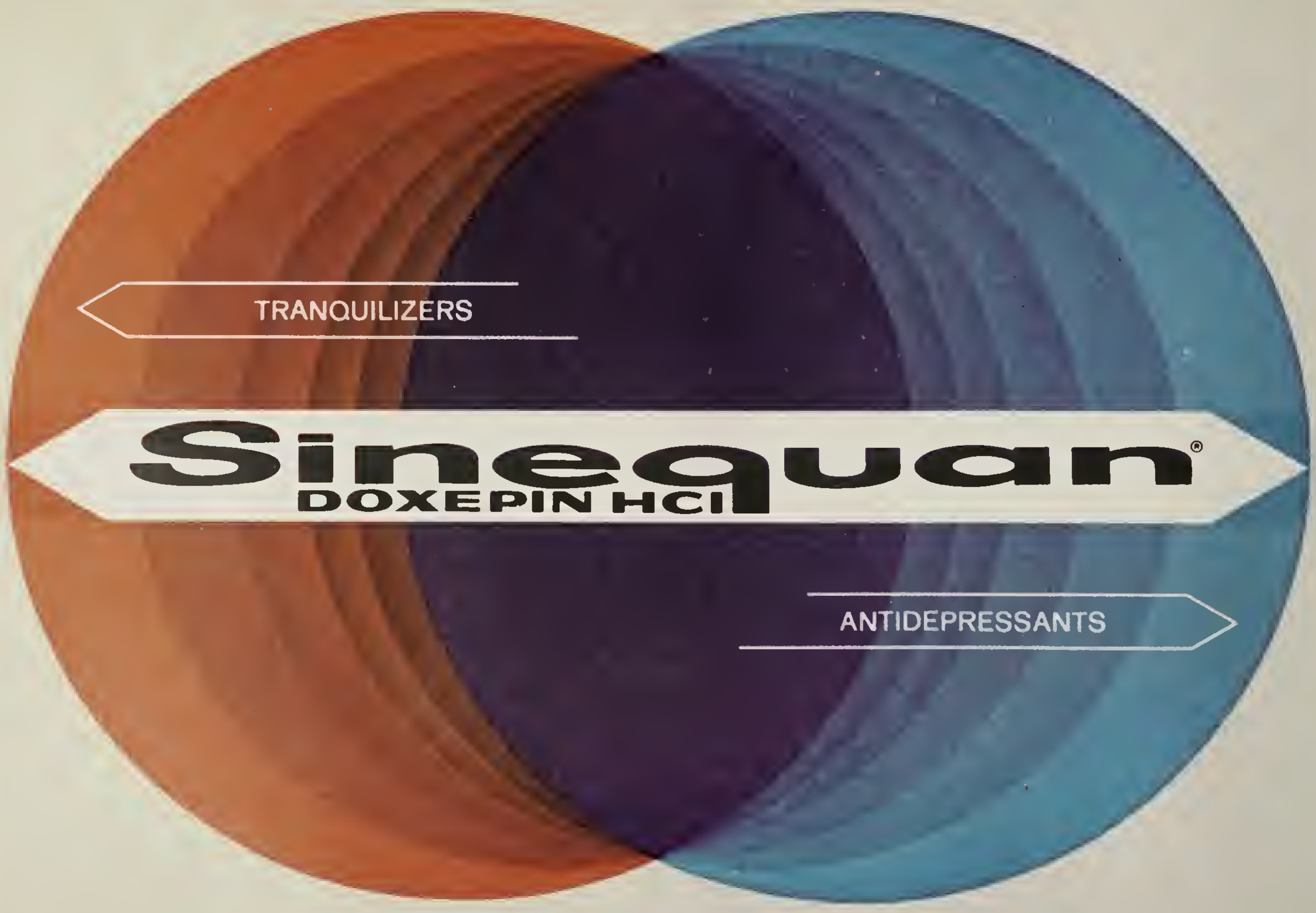
NOW, Pfizer Laboratories introduces

Sinequan
DOXEPIN HCl

The tranquilizer that is an antidepressant.

The antidepressant that is a tranquilizer.

The first single agent with potent dual action...active throughout the spectrum of psychoneurotic anxiety/depression



New Sinequan® (doxepin HCl)... in coexisting anxiety/depression

142 patients with symptoms of both anxiety and depression were treated with Sinequan—*83% of the patients showed marked, moderate, or slight improvement.*

TARGET SYMPTOMS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT MARKED	MODERATE	SLIGHT	% OF PATIENTS IMPROVED
anxiety/ depression	142	118	39	46	33	83%

In three double-blind studies comparing Sinequan and a fixed combination (perphenazine-amitriptyline), Sinequan was found to be at least as effective as—and in some cases more effective than—the combination.

New Sinequan... in prominent anxiety

238 psychoneurotic patients in whom anxiety was the most prominent symptom were treated with Sinequan —*84% of the patients showed marked, moderate, or slight improvement.*

DIAGNOSIS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT MARKED	MODERATE	SLIGHT	% OF PATIENTS IMPROVED
psychoneurotic anxiety	238	201	92	59	50	84%

In eight double-blind studies of Sinequan and either chlordiazepoxide or diazepam, Sinequan was always found to be at least as effective as—and in some cases more effective than—the tranquilizers in relieving symptoms of anxiety.

New Sinequan... in prominent depression

259 psychoneurotic patients in whom depression was the most prominent symptom were treated with Sinequan—*81% of the patients showed marked, moderate, or slight improvement.*

DIAGNOSIS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT MARKED	MODERATE	SLIGHT	% OF PATIENTS IMPROVED
psychoneurotic depression	259	210	106	72	32	81%

In five double-blind studies of Sinequan and amitriptyline, Sinequan was always found to be at least as effective as—and in some cases more effective than—the antidepressant in relieving symptoms of depression.

Data on File, Medical Research Laboratories, Pfizer Pharmaceuticals, Chas. Pfizer & Co., Groton, Conn.

Summary of clinical experience with Sinequan (doxepin HCl) in, Pitts, N.: The Clinical Evaluation of Doxepin—A New Psychotherapeutic Agent: Psychosomatics 10:164, May-June, 1969.

Adverse reactions:

Sinequan (doxepin HCl) is usually well tolerated, even in the elderly. Those side effects which do occur are generally mild.

Most frequently observed side effects

Drowsiness has been observed, usually early in the course of therapy. It tends to disappear as therapy continues.

Anticholinergic effects (including dry mouth, blurred vision, constipation) have been reported. They are usually mild and often subside with continued therapy or reduction of dose.

Infrequently observed side effects

Extrapyramidal symptoms have been infrequent and have usually occurred at high dose levels. They tend to be mild and easily controlled.

Cardiovascular effects, such as hypotension and tachycardia, have been reported infrequently.

Other infrequently reported side effects include dizziness, nausea, increased sweating, edema, nasal congestion and weight gain.

Sinequan is noneuphoriant, and no dependence has been reported to date.

Safety:

Liver disorders, blood dyscrasias, lens opacities or pigment deposits in eyes or skin have not been reported to date with Sinequan.

Contraindications:

Sinequan is contraindicated in individuals who have shown hypersensitivity to the drug, and in patients with glaucoma or a tendency to urinary retention.

Warnings:

Sinequan should not be used concomitantly or within two weeks of therapy with MAO inhibitors.

Sinequan should not be used in pregnant women unless, in the judgment of the physician, it is essential for the welfare of the patient. Its use in children under 12 years of age is not recommended because safe conditions for its use have not been established.

(See last page for full adverse reactions, contraindications, warnings and precautions.)

Pfizer

LABORATORIES DIVISION
New York, N. Y. 10017

Recommended dosage:

Starting dosage—
25 mg., t.i.d.
Maximum dosage—
300 mg. per day.

Expected activity:

Antianxiety activity is rapidly apparent, comparable to that of the benzodiazepine tranquilizers. Antidepressant activity is comparable to the tricyclic antidepressants.

How supplied:

Bottles of 100 capsules of 10 mg., 25 mg., and 50 mg.; bottles of 1000 capsules of 25 mg. and 50 mg.

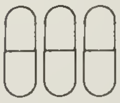
(ACTUAL SIZE)

10mg. 25mg. 50mg.

NEW

Sinequan®

DOXEPIN HCl



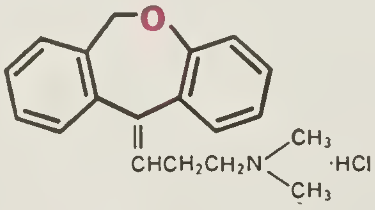
Starting dosage:
25 mg. t.i.d.

The first single agent that can be prescribed as a tranquilizer, an antidepressant...or both

SINEQUAN (Doxepin·HCl) Capsules

Description. SINEQUAN (doxepin·HCl) is a new dibenzoxepin psychotherapeutic agent with marked antianxiety and significant antidepressant activity.

Chemistry. SINEQUAN (doxepin·HCl) is a dibenzoxepin derivative and is the first of a new family of psychotherapeutic agents. Specifically, it is an isomeric mixture of N,N-Dimethyl-dibenz(b,e)oxepin-$\Delta^{11(6H)}$, γ propylamine hydrochloride.



SINEQUAN (doxepin • HCl)

Indications. In a carefully designed series of controlled studies, SINEQUAN (doxepin·HCl) has been shown to have marked antianxiety and significant antidepressant activity. SINEQUAN (doxepin·HCl) is recommended for the treatment of:

1. Patients with psychoneurotic anxiety and/or depressive reactions.
2. Mixed symptoms of anxiety and depression.
3. Alcoholic patients with anxiety and/or depression.
4. Anxiety associated with organic disease.
5. Psychotic depressive disorders including involutional depression and manic depressive reactions.

The target symptoms of psychoneurosis that respond particularly well to SINEQUAN (doxepin·HCl) include anxiety, tension, depression, somatic symptoms and concerns, insomnia, guilt, lack of energy, fear, apprehension and worry.

In those patients in whom anxiety masks the depressive state, SINEQUAN (doxepin·HCl) is of particular value since it exerts a potent antidepressant effect as well as antianxiety activity.

Patients who have failed to respond to other antianxiety or antidepressant drugs may benefit from treatment with SINEQUAN (doxepin·HCl).

Clinical experience has shown that SINEQUAN (doxepin·HCl) is safe and well tolerated even in the elderly patient.

In a large series of patients systematically observed for withdrawal symptoms, none were reported. This is consistent with the virtual absence of euphoria as a side effect and the lack of addiction potential characteristic of this type of chemical compound.

Contraindications. SINEQUAN (doxepin·HCl) is contraindicated in individuals who have shown hypersensitivity to the drug.

SINEQUAN (doxepin·HCl) is contraindicated in patients with glaucoma, or a tendency to urinary retention.

Warnings. *Usage in Pregnancy:* SINEQUAN (doxepin·HCl) has not been studied in the pregnant patient. It should not be used in pregnant women unless, in the judgment of the physician, it is essential for the welfare of the patient, although animal reproductive studies have not resulted in any teratogenic effects.

Usage in Children: The use of SINEQUAN (doxepin·HCl) in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEQUAN (doxepin·HCl). The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Precautions. Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking this drug.

Patients should also be cautioned that their response to alcohol may be potentiated.

Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy.

Although SINEQUAN (doxepin·HCl) has significant tranquilizing activity, the possibility of activation of psychotic symptoms should be kept in mind.

Other structurally related psychotherapeutic agents (e.g. iminodibenzyls and dibenzocycloheptenes) are capable of blocking the effects of guanethidine and similarly acting compounds in both the animal and man. SINEQUAN (doxepin·HCl), however, does not show this effect in animals. At the usual clinical dosage, 75 to 150 mg. per day, SINEQUAN (doxepin·HCl) can be given concomitantly with guanethidine and related compounds without blocking the antihypertensive effect. At doses of 300 mg. per day or above, SINEQUAN (doxepin·HCl) does exert a significant blocking effect. In addition, SINEQUAN (doxepin·HCl) was similar to the other structurally related psychotherapeutic agents as regards its ability to potentiate norepinephrine response in the animal. However, in the human this effect was not seen. This is in agreement with the low incidence of the side effect of tachycardia seen clinically.

Adverse Reactions. Anticholinergic Effects: dry mouth, blurred vision, and constipation have been reported. They are usually mild, and often subside with continued therapy or reduction of dose.

Central Nervous System Effects: drowsiness has been observed. This usually occurs early in the course of treatment, and tends to disappear as therapy is continued.

Cardiovascular Effects: tachycardia and hypotension have been reported infrequently.

Other infrequently reported side effects include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as increased sweating, weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash, and pruritus.

Dosage. For most patients with illness of mild to moderate severity, a starting dose of 25 mg. t.i.d. is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg./day to 150 mg./day.

In more severely ill patients, an initial dose of 50 mg. t.i.d. may be required with subsequent gradual increase to 300 mg./day if necessary. Additional therapeutic effect is rarely to be obtained by exceeding a dose of 300 mg./day.

In patients with very mild symptomatology, or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg./day.

Although optimal antidepressant response may not be evident for two to three weeks, antianxiety activity is rapidly apparent.

Supply. SINEQUAN (doxepin·HCl) is available as capsules containing doxepin HCl equivalent to 10 mg., 25 mg., and 50 mg. of doxepin base in bottles of 100; and 25 mg. and 50 mg. in bottles of 1000. Issued September 1969

Pfizer
LABORATORIES DIVISION
New York, N.Y. 10017

PENNSYLVANIA MEDICINE

obituaries

○ **Indicates membership in the Pennsylvania Medical Society at time of death.**

○ **William D. Travis,** Saxonburg; University of Pittsburgh School of Medicine, 1939; age 56; died December 1, 1969. He is survived by his wife, a son, a daughter, his mother and step-father.

○ **James F. Trimble,** Greensburg; Cornell University Medical College, 1916; age 81; died November 23, 1969. He had practiced medicine for fifty years. Survivors include his wife, a daughter, a sister and a brother.

○ **Herman H. Walker,** Linesville; Jefferson Medical College 1909; age 83; died December 5, 1969. He was a past president of the Crawford County Medical Society and a member of the Board of Trustees and Counselors of the Pennsylvania Medical Society for ten years. Surviving are his wife, a daughter, a son and a sister.

○ **Sem G. Beck,** Nazareth; McGill University Faculty of Medicine, Montreal, Canada, 1912; age 83; died December 23, 1969. He was in the practice of medicine in Nazareth until his retirement in February of 1969. He received the PMS Fifty-Year Award in 1962 and the Sons of the American Revolution good citizen award in 1963. Surviving are his wife, four daughters, a brother and a sister.

○ **Alexander G. Copetas,** Pittsburgh; University of Pittsburgh School of Medicine, 1947; age 47; died January 7, 1970. He is survived by his wife and two daughters.

○ **Eugene J. Cotter,** Erie; University of Pittsburgh School of Medicine, 1935; age 61; died December 21, 1969. He was a fellow of the American College of Cardiology and the American Geriatric Society. Surviving are his wife, two brothers and two sisters.

○ **Moses I. Francis,** Coatesville; American University of Beirut, Lebanon, 1931; age 64; died December 26, 1969. He is survived by a daughter, a brother and a sister.

○ **Richard B. Fruchtman,** Philadelphia; Jana Kazimerza University, Lemberg, Poland, 1925; age 70; died September 27, 1969. No survivors are listed.

○ **Henry E. Guth,** Allentown; Temple University School of Medicine, 1917; age 81; died December 17, 1969. He was a fellow of the American College of Surgeons and the International Academy of Proctology. He is survived by a daughter.

○ **James M. Hammett,** McKeesport; University of Pittsburgh School of Medicine, 1912; age 79; died December 19, 1969. He served as a lieutenant in the Air Force in World War I and was a member of the Allegheny County Obstetrics Society. Surviving are his wife, two sons, one of whom is James H. Hammett, M.D., Fairfield, and a sister.

○ **Robert E. Haughey,** McKeesport; St. Louis University Medical School, St. Louis, Mo., 1947; age 49, died January 4, 1970. He served with the Navy during World War II and was a member of the American Academy of General Practice. He is survived by his wife, four sons, four daughters and a brother.

○ **Wilson J. Hoffman,** East Brady; University of Pittsburgh School of Medicine, 1930; age 66; died January 7, 1970. No survivors are listed.

○ **Charles M. Hughey,** McDonald; University of Pittsburgh School of Medicine, 1935; age 58; died December 17, 1969. He served as a captain in the Army Medical Corps during World War II and was a charter member of the American Academy of General Practice. Surviving are his wife, a son, two daughters and four brothers, one of whom is James R. Hughey, M.D. of McDonald.

○ **Elvin W. Keith,** Pottsville; Jefferson Medical College, 1913; age 80; died December 23, 1969. He was in the general practice of medicine in Minersville for fifty-four years, until his retirement over two years ago. Surviving are his wife and son.

○ **James L. Lubrecht,** Lock Haven; Medico-Chirurgical School, Philadelphia, 1907; age 87; died December 21, 1969. He had been a physician for sixty years until his retirement seven years ago. He served in the Army Medical Corps during World War I, and received the PMS Fifty-Year Award in 1957. He is survived by his wife, a son, a daughter and two brothers.

○ **Jesse Margolis,** Uniontown; University of Illinois College of Medicine, 1925; age 70; died December 22, 1969. He is survived by his wife, a son and a daughter.

○ **Thomas B. McCollough,** Pittsburgh; University of Pittsburgh School of Medicine, 1919; age 74; died December 29, 1969. He is survived by his wife and two daughters.

○ **William J. McGregor,** Pittsburgh; University of Pittsburgh School of Medicine, 1911; age 85; died December 31, 1969. He was a fellow of the American College of Radiology. Surviving are two daughters and a son.

○ **Francis L. Conwell,** Tarentum; University of Pittsburgh School of Medicine, 1918; age 76; died November 4, 1969. He had practiced medicine for fifty years before his retirement six years ago. He served in the Navy during World War I. Surviving are his wife, two daughters, and a son, Francis L. Conwell, Jr., M.D., Brookville.

○ **Michele Gerundo,** Philadelphia; Institute of Medical Science, Mexico City, Mex., 1928; age 65; died October 25, 1969. He had been research professor in pathology at Hahnemann Medical College. He served in teaching and research posts throughout the world and is a renowned author. His wife, Isabel Gerundo, M.D., survives.

○ **Bret H. Hall,** Bradford; Baltimore School of Medicine, Baltimore, Md., 1898; age 96; died October 23, 1969. There are no survivors.

○ **E. Ross Laughlin,** Catasaqua; University of Toronto Faculty of Medicine, Toronto, Can., 1928; age 77, died October 23, 1969. Surviving are a wife, a son, a daughter, a brother and a sister.

○ **Edward H. Robinson,** Pittsburgh; Temple University School of Medicine, 1926; age 70; died November 13, 1969. Surviving are his wife, a son, a sister and his step-mother.

PENNSYLVANIA MEDICINE continuing education

A list of educational opportunities offered to physicians in the interest of maintaining their competence and skill. Unless otherwise indicated, all courses are designed for physicians engaged in primary patient care.

CARDIOVASCULAR DISEASE

April 14, 1970; Lancaster General Hospital

I—**The Etiology, Pathogenesis and Prevention of Atherosclerosis and Thrombosis** (Program in Continuing Medical Education—2 hrs. every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

April 22, 1970; Harrisburg Hospital

C—**Cardiopulmonary Resuscitation Instructors' Training Course**; by Pa. Heart Assoc., Harrisburg Hospital and South Central Pa. Heart Assoc; 8 hrs. AAGP credit approved; $15 fee. Contact Mrs. Kathryn M. Close, Exec. Dir., South Central Pa. Heart Assoc., 2915 Wayne St., Harrisburg 17111.

May 1, 1970; Philadelphia

C/AMA—**Cardiopulmonary Resuscitation Instructors' Course:** by Pa. Heart Assoc. and Heart Assoc. of Southeastern Pa.; at Jefferson; 8 hrs. AAGP credit approved; $15 fee. Contact John H. Killough, M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 7–8, 1970; Erie

I/AMA—**Pharmacologic Rationale of Treatment of Intractable Angina** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

DERMATOLOGY

April 16, 1970; York Hospital

I/AMA—**Dermatologic Drug Reactions and Their Pathophysiology** (Program of Continuing Medical Education—each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

ELECTROCARDIOGRAPHY

May 6, 1970; Sayre

C—**Electrical Safety in the Hospital;** at Robert Packer Hosp.; by Donald Guthrie Medical Center; 7 hrs. Contact Wm. C. Beck, M.D., Guthrie Clinic, Guthrie Sq., Sayre 18840.

"CODE KEY"

C—Consecutive days
I—Intermittent
O—Circuit
PG—Postgraduate Traineeship
R—Radio
TV—Television
S—Designed for full-time specialists
AMA—AMA Accredited Institution
C E S—Council on Education and Science, Pennsylvania Medical Society
Hahnemann—Hahnemann Medical College and Hospital
Hershey—Milton S. Hershey Medical Center
Jefferson—Jefferson Medical College of Philadelphia
Penn-Grad—University of Pennsylvania, Division of Graduate Medicine
Pitt—University of Pittsburgh School of Medicine
Pitt P.H.—University of Pittsburgh Graduate School of Public Health
Penn State—Pennsylvania State University
Temple—Temple University Health Sciences Center
U. of Pa.—University of Pennsylvania School of Medicine
Woman's—Woman's Medical College of Pennsylvania

ENDOCRINOLOGY

April 1–29, 1970; Sewickley Valley Hospital

I/AMA—**Current Medical-Surgical Aspects of Endocrine Problems** (Program of Continuing Medical Education—ea. Wed. except April 15; 4 sessions); by Jefferson and Penn State; AAGP credit applied for. Contact John H. Killough, M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 16, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Adrenal Gland** (Program of Continuing Medical Education) by Jefferson and Penn State; at St. Luke's Hospital, 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Phila. 19107.

April 16, 1970; Pottsville

I/AMA—**Treatment of Hyperthyroidism** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

April 28, 1970; Johnstown

I/AMA—**Obesity** (Program of Continuing Medical Education—Last Tuesday—7 months); at Conemaugh Valley Memorial Hospital; by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

April 28, 1970; Lancaster General Hospital

I—**The Recognition and Treatment of Renal Complications of Diabetes** (Program in Continuing Medical Education—2 hrs., every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

May 7, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Ovary** (Program for Continuing Medical Education); by Jefferson and Penn State; at St. Luke's Hospital; 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

GASTROENTEROLOGY

April 14, 1970; Chester

I/AMA—**Inflammatory Diseases of the Bowel** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 15, 1970; Scranton

I/AMA—**Preparation of and Postoperative Care of the Patient Requiring Surgery of the Hepato-Biliary Tract** (Program of Continuing Medical Education—3rd Wed. ea. mo. 8 mos.); by Jefferson and Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 21, 1970; Chester

I/AMA—**The Irritable Colon Syndrome and Diverticular Disease of the Colon** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 29, 1970; Chester

I/AMA—**Immunoglobulins and the GI Tract** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

(*Continued on page 76.*)

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GENERAL MEDICINE

Every Thursday; Hazleton State General Hospital

I—**Program of Continuing Medical Education by Hazleton Branch, Luzerne County Medical Society.** Contact Robert Gunderson, M.D., Suite 412 Northeastern Building, Hazleton, Pa. 18201.

April 16, 1970; Altoona Hospital

I/AMA—**Diagnosis of Anemia** (Program of Continuing Medical Education—twice a month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 6, 1970; Allentown

I/AMA—**The Expanding Parameters of Medicine: Holography-Telemetry** (8 week Education Program—1st Wed. ea. mo.); by U. of Pa.; at Sacred Heart Hosp.; 3 hrs. AAGP credit. Contact Robert F. Brennan, M.D., Sacred Heart Hosp., Allentown 18102.

May 7, 1970; Altoona Hospital

I/AMA—**Short Course in Cardiac Auscultation** (Program of Continuing Medical Education—twice monthly); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 7, 1970; Pottsville Hospital

I/AMA—**Modern Management of Shock** (Program of Continuing Medical Education, 1st Thursday each month); by Jefferson and Penn State; 2 hrs AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

INTERNAL MEDICINE

Fourth Tuesday, each month; Altoona Hospital
First Tuesday, each month; Greensburg (Westmoreland Hosp.)
First Thursday, each month; Johnstown (Conemaugh Valley Mem. Hosp.)
Second Tuesday, each month; Natrona Heights (Allegheny Valley Hosp.)
Last Monday, each month; Uniontown Hospital
First Wednesday, each month; Washington Hospital

O/I—**Diagnosis and Management of Hypertension;** by Western Pa. Regional Medical Program and Pitt; AAGP credit applied for. Contact Alvin P. Shapiro, M.D., Project Dir., 501 Flannery Bldg., 3530 Forbes Ave., Pittsburgh 15213.

April 15, 1970; Reading

I/AMA—**Marital and Sexual Counseling for the Internist** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Community General Hosp. Contact Paul K. Stolz, M.D., Dir., Cont. Ed. Community Gen. Hosp., 135 N. 6th St., Reading 19601.

May 4, 1970; Philadelphia

I/AMA—**Extra Cranial Vascular Occlusions** (Program of Continuing Medical Education); by Jefferson and Penn State; at Methodist Hosp.; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

MALIGNANT DISEASE

April 22–May 27, 1970; Philadelphia

I—**Cancer Detection in Office Practice** (5 consecutive Wed. afternoons); by American Cancer Society; at American Oncologic Hosp.; 20 hrs. AAGP credit; limited to 8 per group. Contact Joseph G. Strawitz, M.D., Assoc. Dir., American Oncologic Hosp., Central & Shelmire Aves., Philadelphia 19111.

MENTAL RETARDATION

April 13–17, 1970; Elwyn

C—**Fourth Annual Symposium on Mental Retardation;** at Elwyn Institute; 7 hrs. each day; $25 fee. Contact Gerald R. Clark, M.D., President, Elwyn Institute, 111 Elwyn Rd., Elwyn 19063.

NEUROLOGY

April 8, 1970; Philadelphia

C/MA—**Teaching Day in Neurology;** at Albert Einstein Medical Center; 6 hrs. AAGP credit; $25 fee (includes lunch). Contact Solomon Mintz, M.D., Ed. Chmn., Albert Einstein Medical Center, York & Tabor Roads, Philadelphia 19141.

OBSTETRICS & GYNECOLOGY

April 9, 1970; Hershey Motor Lodge

C—**11th Annual Institute on Maternal and Child Health;** by CES (Comm. on Maternal and Child Health); $10 fee. Contact Richard D. Baltz, M.D., Coordinator, Pennsylvania Medical Society, Taylor Bypass & Erford Road, Lemoyne 17043.

April 23–24, 1970; Erie

I/AMA—**Breast Carcinoma** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

April 30, 1970; York Hospital

I/AM—**Pathophysiology of Fallopian Tube Function** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, PhD., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

OPHTHALMOLOGY

April 15–17, 1970; Pittsburgh

C/S—**Ophthalmic Micro Surgery;** by Pitt; at Eye and Ear Hospital; 8 hrs. each day; $350 fee; Maximum registration—12. Contact Kenneth T. Richardson, M.D., Eye and Ear Hospital, 230 Lothrop St., Pittsburgh 15213.

April 20–22, 1970; Pittsburgh

C/S—**The Glaucomas;** by Pitt; at Eye and Ear Hospital; 8 hrs. each day; $150 fee; Maximum registration—20. Contact Kenneth T. Richardson, M.D., Eye and Ear Hospital, 230 Lothrop St., Pittsburgh 15213.

PEDIATRICS

April 22, 1970; Sellersville

I/AMA—**The Child with a Convulsion** (Postgraduate Series—1 day ea. mo., 7 months); by Hahnemann; at Grand View Hosp., 2 hrs. AAGP credit. Contact Henry Ruth, M.D., Postgraduate Coordinator, Grand View Hosp., Lawn Ave., Sellersville 18951.

May 12–15, 1970; Philadelphia

C—**19th Annual Pediatric Postgraduate Seminar;** at St. Christopher's Hospital for Children; 6 hrs. each day; $100 fee. Contact John B. Bartram, M.D., Director, Division of Service to Handicapped, St. Christopher's Hospital, 2600 N. Lawrence St., Philadelphia 19133.

PHYSIOLOGY

April 23, 1970; York Hospital

I/AMA—**The Physiology of Acidosis** (Program of Continuing Medical Education—Each Thursday, 30 weeks); by Jefferson and Penn State; 3 hrs. AAGP credit; $40 fee for 30 weeks ($8 each). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

RADIOLOGY AND RADIOISOTOPES

May 5, 1970; Chester

I/AMA—**The Use of Isotopes in Medicine** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

SURGERY

April 16, 1970; Wilkes-Barre General Hospital

I/AMA—**Surgical Aspects of Inflammatory Diseases of the Bowel** (Program of Continuing Medical Education—one Thursday each month); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc, Dean, Jefferson, 1025 Walnut Street. Philadelphia 19107.

PENNSYLVANIA MEDICINE

meetings

APRIL

Elwyn Institute 1970 Symposium on the Mentally Disabled, April 13-17, 1970, at the Institute. Contact Elwyn Institute, Elwyn, Pa. 19063.

American Academy of Pediatrics Spring Session, April 13-15, 1970, Washington Hilton Hotel, Washington, D. C. Contact American Academy of Pediatrics, 1801 Hinman Ave., Evanston, Ill. 60204.

Thirteenth Annual Neuropsychiatric Institute of the Coatesville Veterans Administration Hospital, April 17, 1970, for physicians, social workers, psychologists and ancillary personnel. For information contact the hospital.

PMS Annual Officers Conference, April 22-23, 1970, Penn Harris Motor Inn, Camp Hill, Pa.

Pennsylvania Thoracic Society and Pennsylvania Society of Chest Physicians, April 29-May 1, 1970, Howard Johnson's Motor Lodge, Chatham Center, Pittsburgh, Pa. Six hours AAGP credit given for attendance.

MAY

International Academy of Proctology Congress and Teaching Seminar, May 13-22, 1970, Palma, Malloreca, Spain.

Ninth Annual Seminar on Cancer and Diseases of the Breast, May 14-16, 1970, Brown Palace Hotel, Denver, Colo. Contact Wendell P. Stampfli, M.D., c/o St. Luke's Hospital, Denver, Colo.

Pennsylvania Society of Anesthesiologists Annual Meeting, May 15-17, 1970, Chatham Center, Pittsburgh, Pa.

Medical Society of New Jersey 204th Annual Meeting, May 16-19, 1970, Haddon Hall, Atlantic City, N.J.

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Films: AMA catalogue, *Medical and Surgical Motion Pictures*, lists almost 5,000 selected films of value to educators, hospitals and society program chairmen, free from the Medical Motion Pictures and Television Section, AMA, 535 N. Dearborn St., Chicago, Ill. 60610 . . . "Reasonable Expectations in the Management of Diabetes," a color-sound film presented by Theodore S. Danowski, M.D., professor of medicine, University of Pittsburgh School of Medicine, free on loan from USV Pharmaceutical Corporation Film Library, 800 Second Ave., New York, N.Y., 10017, Attn: Field Services Administrator . . . "The Unwanted Four," a 35 mm. color-sound film strip dramatizing food handling practices to guard against staphlococcus, clostrilium perfringens, salmonella and streptococcus, $10 per strip from the National Restaurant Association, 1530 N. Lake Shore Drive, Chicago, Ill. 60610.

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Physicians wanted: male and female, licensed, for children's camps, July-August. Good salary; free placement; 350 member camps. Write Dept. P, Association Private Camps, 55 W. Forty-second St., New York, N. Y. 10036. Telephone (212) OX 5-2656.

Approved Two-Year General Practice Residency—available July 1, 1970, in 301-bed general hospital, Philadelphia suburb; one year approved internship required; ECFMG Certificate required of foreign graduates. Exchange visitor number available; $750 per month first year; $800 per month second year. Full maintenance or extra living-out allowance. Duty every fourth night and fourth week-end. Active teaching program and approved internship. Apply: Director of Medical Education, Delaware County Memorial Hospital, Drexel Hill, Pa.

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PENNSYLVANIA MEDICINE

in my opinion

The Cost of Medical Care

There has been much publicity over the news media and in various editorials of the rising cost of medical care. This upward spiral of hospital costs and doctors' fees has, also, been attacked and analyzed by experts in the fields of health and medical science, politicians, and by the Department of Health, Education, and Welfare. Various solutions have been proposed ranging from the reshaping of the entire system of delivery of medical care to the need for providing more money and more doctors. However, before we begin to think of the result this great debate will have on the shape of future medical care, we should look back and discuss the reasons for increased medical costs as well as what has been accomplished in the types and quality of past health care.

The independent non-profit hospitals have been confronted with the problems of underpaid nursing, technical and ancillary personnel as well as the task of expansion of bed capacity and the purchase and installation of expensive and highly complex electronic, office and X-ray equipment. These tasks are further compounded by the need to install the completely new departments of intensive care, coronary care, rehabilitation and to hire and train the specialized staffs which these departments require. Upon reflection of what has been accomplished, these hospitals have done a commendable job in the face of inflationary trends and shortage of manpower.

The physician in solo and group practice, also, has had to make major adjustments in his method of administering medical care and in the types of services which he has had to offer his patients. As a result of the rapid pace of medical and technological science, the physician in private practice has had to install the latest in diagnostic, laboratory and office equipment and to hire properly trained assistants. He has had to operate his office in a very efficient manner in order to handle the increased patient load and to give individual and sympathetic care to each person requiring assistance. These goals have in the majority been attained without sacrificing the physician's care of the hospital patient's home health care and his keeping abreast of latest advancements in medical science.

In conclusion, the public has had to pay increased monetary costs for medical and hospital care but for his money he has gained the greater benefits of the fruits of medical science in the doctor's office and in the local hospital without jeopardizing the freedom of free choice of physician and hospital. However, to safeguard our cherished freedoms without further governmental investigation and legislation requires a responsibility on the part of the hospitals and physicians to control the cost of medical care without sacrificing the quality or amount of health services.

August F. Frattali, M.D.
Reprinted from
Lackawanna Medicine

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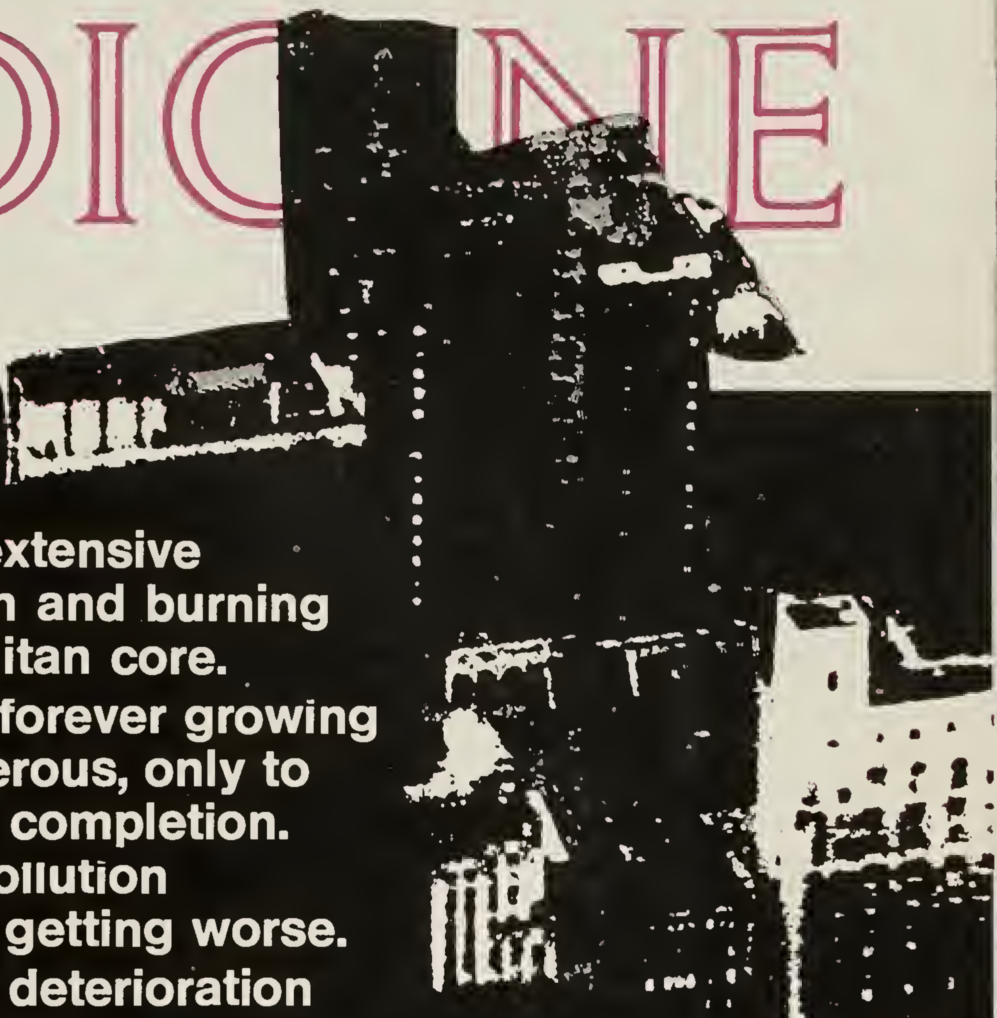

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is strength being its only defense against
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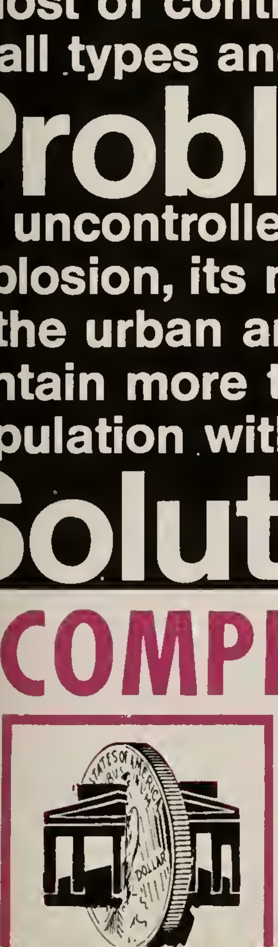

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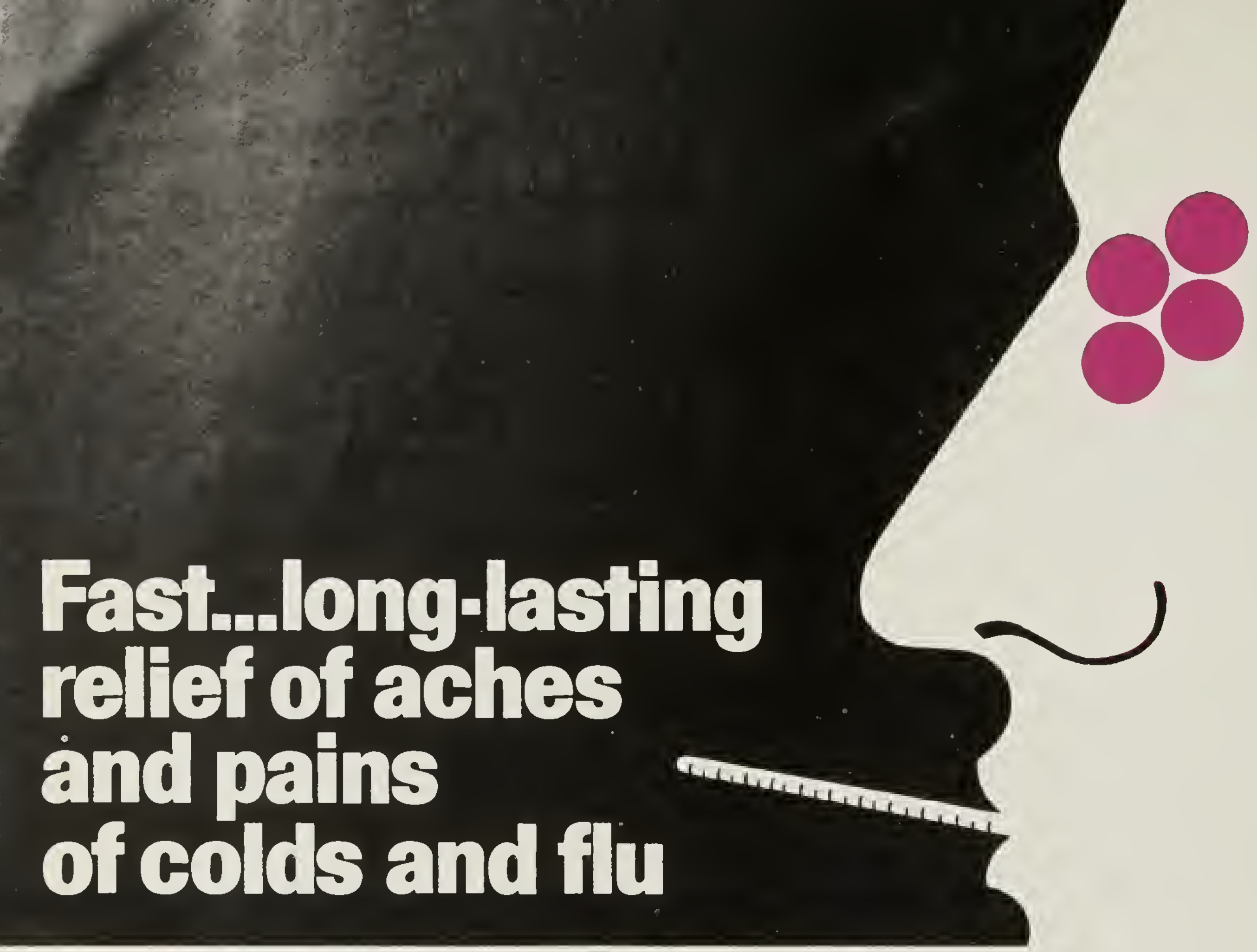
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MEDICINE

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MAY, 1970

PAMPAC ESSAY CONTEST WINNERS ANNOUNCED

One student from each of the Commonwealth's seven medical schools was awarded a $500 scholarship from the Pennsylvania Medical Political Action Committee during the 1970 Officers' Conference last month. This year the theme of the essay was "Is There a Generation Gap in Medicine?" Winners are: Ralph S. Sando, Temple University; Alan D. Stewart, University of Pennsylvania; Donald S. Prough, Pennsylvania State University; Karl E. Williams, University of Pittsburgh; Noel Cawley, Woman's Medical College of Pennsylvania; Samuel S. Fager, Hahnemann Medical College; and David Jacoby, Jefferson Medical College. The entries were judged by PaMPAC's Scholarship Awards Committee, including William B. Lamberton, M.D., chairman; Paul S. Friedman, M.D.; R. Edward Steele, M.D., and Robert J. Carroll, M.D.

PMS REPRESENTED AT MEETING ON GREAT LAKES POLLUTION

Two representatives of the PMS Commission on Environmental Health attended a conference April 16 and 17 in Toronto, Canada, on Great Lakes pollution problems. The meeting was organized by the Ontario Medical Association, and was attended by representatives of seven state medical societies and the medical associations of two Canadian provinces. Purposes of the meeting were: the exchange of information, discussion of past action, study of the current problems, and development of a course of action to stop pollution of the inland waterways.

YELLOW FEVER IMMUNIZATION NOW AVAILABLE AT READING

The April issue of PENNSYLVANIA MEDICINE carried a list of immunization centers in the state at which protection against yellow fever for those planning trips abroad is available. During the past month the Reading Hospital Immunization Service has been authorized by the U.S. Public Health Service as Yellow Fever Immunization Center No. 52, bringing the number of such centers in Pennsylvania to eight, according to E. A. Hildreth, M.D., of Reading.

TWO PHYSICIANS HONORED FOR ROLES AS SPEAKERS

The PMS "Golden Voice of Medicine Award" for physicians who fill twenty or more speaking engagements through the State Society's Speakers' Bureau has been presented to two more physicians. Recipients of the awards, which were presented at the 1970 Officers' Conference April 23, are Leo C. Eddinger, M.D., Allentown, and Arthur E. Pollock, M.D., Altoona, the chairman of the Speakers' Bureau. The only other recipient of the award has been Clarence E. Tinsman, M.D., Harrisburg, who records the PMS weekly radio program.

SVRMP RECEIVES GRANT TO CONTINUE PROGRAMS

The Susquehanna Valley Regional Medical Program has been awarded a grant of $792,749 to continue the program's activities in the central Pennsylvania area. The grant comes from the Regional Medical Programs Service of the Department of Health, Education and Welfare, and provides continued support for seven activities begun in 1969 but not yet completed. They include Geisinger Medical Center's program to train forty nurses in coronary care next year and the continuation of the SVRMP information service from the library of the Pennsylvania State University College of Medicine at Hershey. The grant also includes cost of administration of SVRMP through its core staff. Announc ment of the grant was made jointly by Regional Advisory Group Chairman J. Reed Babcock, M.D., of Bellefonte, and Program Director Richard B. McKenzie.

AMA CONVENTION OFFERS FEATURES FOR EVERYONE IN "MEDICAL FAMILY"

The AMA annual convention June 21 through 25 in Chicago promises action for every member of the doctor's family, including postgraduate education for the doctor, community service stimuli through the Woman's Auxiliary Meeting for their wives, and recreation for their children. The hub of the Scientific Program will be the International Amphitheatre, where the entire program can be held on one floor under one roof. The AMA House of Delegates will meet at the Palmer House, and the Woman's Auxiliary at the Drake Hotel.

RUBELLA VACCINE LIMITS TO CHANGE FOR 1970-71

Immunization Project officials in the Pennsylvania Department of Health have announced that more liberal criteria will govern distribution of rubella vaccine beginning in the 1970-71 school year. During the 1969-70 year, distribution of free vaccine was limited to communities with 40,000 population of more and to children in kindergarten through fourth grade. It is expected that all population restrictions will be removed in the fall, and that it may be possible to include children in the fifth and sixth grades in the rubella vaccination program, depending on the amount of funds allocated on or after July 1, 1970. Officials announced that all but three of the fifteen cities in the state with a population of 40,000 or more alread have held rubella programs.

PMS TO CO-SPONSOR NUTRITION COURSES

The PMS Board of Trustees has agreed to co-sponsor with the AMA lectures and seminars on college campuses throughout the Commonwealth on recent developments in foods and nutrition. This activity is scheduled for the fall of 1970.

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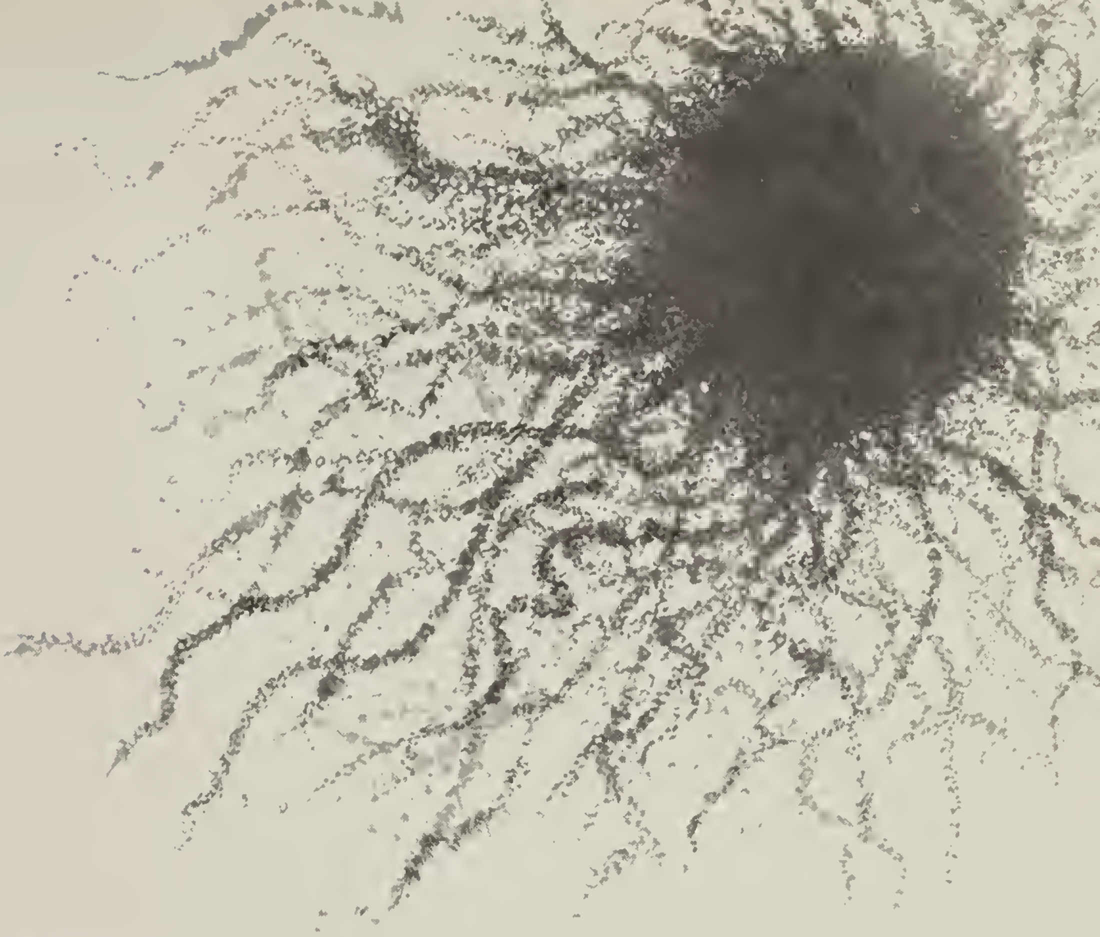

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Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: One tablet b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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General Adverse Effects: Because of the high potency of the drug and the variability of its potential to cause adverse reactions, the following are strongly recommended: 1) the lowest possible effective dose for the individual patient should be prescribed. Increased dosage tends to increase adverse effects, particularly in doses over 150-200 mg/day, without corresponding clinical benefits; and 2) careful instructions to, and observations of, the individual patients are essential to the prevention of serious and irreversible, including fatal, adverse reactions, especially in the aging patient.

Indications: Symptomatic relief of adult rheumatoid and degenerative joint disease unresponsive to adequate trial of salicylates and other measures of established value, such as appropriate rest. Has been found effective in active stages of: 1) moderate to severe rheumatoid arthritis including acute flares of chronic disease, 2) moderate to severe rheumatoid (ankylosing) spondylitis, and 3) moderate to severe degenerative joint disease of the hip (osteoarthritis of the hip). Has been found effective in relieving pain and reducing fever, swelling, and tenderness in acute gouty arthritis in selected patients. May enable reduction of steroid dosage in patients receiving steroids for the more severe forms of rheumatoid arthritis; in such instances the steroid dosage should be reduced slowly and the patients followed very closely for any possible adverse effects.

Contraindications: Children 14 years of age and under; pregnant women and nursing mothers; active gastrointestinal lesions or history of recurrent gastrointestinal lesions; allergy to aspirin and indomethacin.

Warnings: *Gastrointestinal Effects:* Because of the occurrence and, at times, severity of gastrointestinal reactions, be continuously alert for any sign or symptom signaling a possible gastrointestinal reaction. The risks of continuing therapy with INDOCIN in the face of such symptoms must be weighed against the possible benefits to the individual patient. Gastrointestinal effects may be reduced by giving the drug immediately after meals, with food, or with antacids. Use greater care in aging patients.
Ocular Effects: Corneal deposits and retinal disturbances, including those of the macula, have been observed in some patients on prolonged therapy. Discontinue therapy if such changes are observed. Ophthalmologic examination at periodic intervals is desirable in patients on prolonged therapy.
Central Nervous System Effects: INDOCIN (Indomethacin, MSD) may aggravate psychiatric disturbances, epilepsy, and parkinsonism, and should be used with considerable caution in patients with these conditions. If severe CNS reactions develop, discontinue the drug.

Precautions: Blurred vision may be a significant symptom that warrants a thorough ophthalmologic examination. Patients should be cautioned about engaging in activities requiring mental alertness and motor coordination, as driving a car. Headache which persists despite dosage reduction requires complete cessation of the drug. May mask the usual signs and symptoms of infection; therefore, the physician must be continually on the alert for this and should use the drug with extra care in the presence of existing controlled infection. After the acute phase of the disease is under control, an attempt to reduce the daily dose should be made repeatedly until the patient is off entirely.

Adverse Reactions: *Gastrointestinal Reactions:* Single or multiple ulcerations of the esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage, with fatalities in some instances; gastrointestinal bleeding without obvious ulcer formation; perforation of preexisting sigmoid lesions (diverticulum, carcinoma, etc.); rarely, increased abdominal pain in ulcerative colitis patients or development of ulcerative colitis and regional ileitis; gastritis, which may persist after the cessation of the drug; nausea, vomiting, anorexia, epigastric distress, abdominal pain, and diarrhea.
Eye Reactions: Corneal deposits and retinal disturbances, including those of the macula, have been observed on prolonged therapy; blurring of vision.
Hepatic Reactions: Rarely, toxic hepatitis and jaundice, including some fatal cases.
Hematologic Reactions: Aplastic anemia, hemolytic anemia, bone marrow depression, agranulocytosis, leukopenia, and thrombocytopenic purpura. Since some patients manifest anemia secondary to obvious or occult gastrointestinal bleeding, appropriate blood determinations are recommended.
Hypersensitivity Reactions: Acute respiratory distress, including dyspnea and asthma; angiitis; pruritus; urticaria; angioedema; skin rashes.
Ear Reactions: Hearing disturbances, deafness, tinnitus.
Central Nervous System Reactions: Psychotic episodes, depersonalization, depression, coma, convulsions, peripheral neuropathy, drowsiness, mental confusion, lightheadedness, dizziness, headache.
Cardiovascular-Renal Reactions: Edema, elevation of blood pressure, hematuria.
Dermatologic Reactions: Loss of hair, erythema nodosum.
Miscellaneous: Rarely, vaginal bleeding, hyperglycemia, glycosuria, ulcerative stomatitis, and epistaxis.

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Joint Meeting Marks A "First"

M. D., D. O. Link Strengthened

A scientific seminar on high blood pressure and blood circulation diseases made medical history, April 4, in Camp Hill, because it marked the first time that doctors of medicine and osteopathy have joined to formulate and participate in such a program.

Sponsored by the Pennsylvania Medical Society and the Pennsylvania Osteopathic Association, the all-day seminar was moderated jointly by David Bronstein, D.O., and Raymond C. Grandon, M.D., both of Harrisburg. Physicians from throughout the state participated.

Topics for discussion included: diagnosis and classification of high blood pressure; correctable forms of high blood pressure and the selection of drugs to combat it; early diagnosis of venous disorders and blood clots; reduced blood flow to the brain; indications for surgery in blood flow to the brain; indications for surgery in blood flow obstruction; and the rehabilitation of stroke patients.

On the seminar faculty were: John R. Misage, M.D., University of Pittsburgh School of Medicine; Charles M. Worrell, D.O., Harrisburg; Y. W. Gifford, Jr., M.D., Cleveland, Ohio; William Baldwin, Jr., D.O., York; Joseph B. Bittenbender, M.D., Harrisburg; Wayne English, D.O., Kirksville College of Osteopathy and Surgery, Kirksville, Mo., and Benjamin G. Musser, M.D., Harrisburg.

Doctors of medicine and osteopathy in the practice of primary medicine used the seminar as a means of continuing education.

Although the medical-osteopathic seminar was a "first" the two professions have been cooperating unofficially for some years in meeting patient needs.

Doctors of osteopathy and medicine *gathered last month at West Shore Country Club in Camp Hill for a seminar on hypertension.*

Legislative Visit Planned

Nearly thirty physicians representing all of the Congressional districts of the Commonwealth are expected to participate in the annual Pennsylvania Medical Society pilgrimage to the nation's capitol next month for medical-legislative discussions.

During a briefing by the AMA Washington office staff, personal conferences with Congressmen and a working reception, Pennsylvania doctors aim to apprise themselves of current trends in governmental attitudes toward the health profession, and to obtain a broader insight into the docket of proposed and current health legislation.

In their discussions with the state's representatives, the physicians will also inform them that they and most of their medical colleagues at home are frontline ready to assist when called upon to support in helping solve the nation's problems, particularly on issues of health.

The two-day Washington trip is being sponsored by the PMS Council on Governmental Relations and is being coordinated by John H. Harris, Jr., M.D., Carlisle, council chairman, and Mr. Robert H. Craig, Jr., executive assistant for the council.

Federal expert Claire Ryder, M.D., M.P.H. *(right) chief, training and studies branch, division of comprehensive health planning, U. S. Public Health Service, consults with Leonard J. Zimet, (left) executive director, Pennsylvania Osteopathic Association; A. L. Chapman, M.D. (center), director, bureau of planning, evaluation and research, Pennsylvania Department of Health, and other members of the Community Services of Pennsylvania Task Force on Home Care at a March, 1970, meeting at PMS headquarters in Lemoyne.*

New Project Critiqued

Home Care Task Force Meets

The Community Services of Pennsylvania Task Force on Home Care, at its March, 1970, meeting at PMS headquarters in Lemoyne, heard the critique of its outline of a proposed demonstration project in home care by federal expert Claire F. Ryder, M.D., M.P.H., chief, training and studies branch, division of comprehensive planning, U. S. Public Health Service.

The proposal is the result of more than a year of careful study by the task force under the auspices of Community Services of Pennsylvania (CSP), a United Fund agency. Prior to this development, CSP published in February, 1969, the results of an extensive survey of homemaker-home health aide services in the Commonwealth.

Dr. Ryder was acting as a consultant to the group in helping it to decide how to implement the demonstration. The task force is made up of the major statewide public and voluntary health and welfare organizations. Community Services of Pennsylvania is the statewide voluntary citizen health and welfare planning organization.

Home care services are provided by visiting nurses, home-makers, home health aides, social workers, therapists and other medical and social support personnel, in an attempt to offer one kind of answer to the problem of the high cost of health care when a person is not in need of hospital or nursing home care, but needs assistance to maintain himself within his own home.

Participating in the task force from the Pennsylvania Medical Society are A. L. Chapman, M.D., director, bureau of planning, evaluation and research, Pennsylvania Department of Health; Mr. Sam Price, PMS staff representative, and Nathan Sussman, M.D., of Harrisburg. Also a part of the task force are Capital Blue Cross, Hospital Association of Pennsylvania, Pennsylvania Osteopathic Association, Susquehanna Valley Regional Medical Program, Pennsylvania Departments of Community Affairs and Public Welfare and several local health and welfare organizations.

* * * * *

Gastroenterology Awards Offered

The American College of Gastroenterology, in cooperation with William H. Rorer, Inc., Fort Washington, Pa., has announced the 1970 Rorer Awards contest for the best papers in gastroenterology.

Awards will be presented for the best unpublished papers in gastroenterology or an allied subject, and for the best paper published in the American Journal of Gastroenterology.

In the "unpublished" competition, all papers submitted must represent original work in gastroenterology or an allied subject and must not have been previously presented at meetings of any national society. The contents of the papers may be clinical or basic science.

In the "published" competition, prizes will be awarded for the best papers published in The American Journal of Gastroenterology during the twelve months ending June 30, 1970, for which no previous prize has been awarded.

Deadline for the "unpublished" competition is July 15, 1970. Contest details may be obtained by writing to the Research and Education Committee, American College of Gastroenterology, 299 Broadway, New York, N. Y. 10007.

PMS Represented At G. P. Congress

The PMS Special Committee on General Practice was represented at the First International Congress on Group Practice by O. K. Stephenson, M.D., chairman. The meeting was held in Winnipeg, Manitoba, Canada, April 26 to 30.

The congress was concerned with discussion of health services and the methods for providing such services. The program provided for examination of the various forms of group practice and the roles of the physician and ancillary health personnel in providing comprehensive health care.

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Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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PMS Hosts Berks County Meeting

The Berks County Medical Society *conducted its March, 1970, meeting at the Pennsylvania Medical Society headquarters in Lemoyne as part of a continuing program to encourage all county medical groups to avail themselves of an opportunity to see the State Society at work. David N. Farber, M.D., (center photo-left), the county society president, opened the meeting by officially welcoming John E. Hillig, M.D., as a new member to that group. John F. Rineman (right hand photo), executive director of the Pennsylvania Medical Society, and other PMS staff members brief the Berks County visitors on State Society activities and conducted a tour of the headquarters building.*

State Pollution Control Data Gains

Pennsylvania's air pollution control program will soon have the most complete and accurate information on air contamination sources in its ten year history.

A new State Air Pollution Commission regulation now being implemented (No. 6) requires the registering of all planned and existing stationary dischargers of smoke, soot and dust and gaseous matter in the Commonwealth.

Mailing of reporting forms to 20,000 such air contamination sources throughout the state is nearly completed, according to the Health Department's bureau of air pollution control.

The 20,000 industries, municipalities and institutions which represent an estimated 100,000 individual air pollution sources, are allowed 120 days to complete the detailed inventory.

Each discharger must describe his manufacturing process or operation, type and quantity of material processed or produced, volume of his process exhaust, and must provide air contaminant collector and emission information.

"This complete, accurate information will serve as the core of the Commonwealth's entire air pollution control program and enable both the commission and the Health Department to better direct their control efforts," Ben A. Brodovicz, director of the department's division of technical services and monitoring, said.

"Hopefully, within a year we'll have processed and analyzed enough data to be able to begin formulating a better control program and to effectively utilize new techniques and develop any additional regulations," he said.

Brodovicz said that the data will enable Pennsylvania to meet a provision of the Federal Air Quality Act requiring such detailed information for recently designated metropolitan Philadelphia and Pittsburgh air quality control regions.

Air pollution control engineers both at the main office at Harrisburg and in six regional offices throughout the state, are available to lend assistance to those requiring it.

Health Careers Grant Awarded P. S. U.

The Bureau of Health Manpower of the National Institutes of Health has awarded a grant of $462,000 to the Pennsylvania State University to accelerate its four-year program which prepares students for positions in health planning and health care administration.

The major is offered at the university's division of biological health under the direction of Dr. Marshall W. Raffel who says, "There is an enormous need in this country for persons trained to plan, administer and evaluate health programs in every setting." The program introduced at Penn State just last fall, is one of the few four-year planning and administration programs offered in the country, and the only one which emphasizes preparation for policy planning and administration. The grant will permit expansion of the new program in expectation of increased enrollment.

BUYER'S NOTICE

Any physician who purchased a Speed Reading Course from Programmed Learning Incorporated at the 1969 Scientific Session at Host Farm and did not receive the Reading Course or Reading Pacer should contact the Council on Education and Science, Pennsylvania Medical Society, Taylor Bypass and Erford Rd., Lemoyne, Pennsylvania 17043.

Blue Shield Hits Record Payments

Pennsylvania Blue Shield in 1969 made record-high payments totaling $111 million for doctors' services performed for subscribers, it was announced by A. W. Cowley, M.D., chairman of the board, at the annual meeting of corporate members of the statewide health care financing plan.

Nearly 7.5 million persons, 65 per cent of the state's population, are eligible to be served by Pennsylvania Blue Shield either as members of the plan, or as beneficiaries under three federal and state government programs for which Blue Shield acts as fiscal administrator. Dr. Cowley reported that the Pennsylvania plan remained the largest of seventy-two Blue Shield plans in the United States on the basis of the number of persons served.

Blue Shield membership reached 5.5 million in 1969, an increase of 147,000 over 1968. Persons served through government programs, Medicare Part B, the Civilian Health and Medical Program of the Uniformed Services, and Pennsylvania's Medical Assistance, total 2.5 million, an increase of about a half million.

Last year Pennsylvania Blue Shield paid more than $90.6 million for doctors' services and medical supplies under Medicare Part B on behalf of the Social Security Administration. Payments under the uniformed services program totaled $2.6 million.

Dr. Cowley reported that new records also were set in the number of claims paid during 1969. Of the nearly 4.7 million claims paid under all programs, 2.8 million were for Blue Shield subscribers, 1.6 million for Medicare Part B beneficiaries, 147,000 for Medicaid recipients and 29,000 for civilians under the uniformed services program.

Of the 2.8 million Blue Shield claims paid in 1969 for doctors services 1,085,000 were for surgery and obstetrical delivery (totaling $63 million) and 955,000 were for medical care (amounting to $33.5 million). Major medical coverage payments totaled nearly $3.1 million.

Also, 798,000 claims (amounting to $11.3 million) were paid for medical and surgical services performed for persons 65 years of age or older who are covered under Blue Shield's complementary coverage to Medicare Part B.

The number of Pennsylvania doctors participating in Blue Shield set another record in 1969 reaching a total of 18,794. This was an increase of 970 over 1968. The total included 14,138 doctors of medicine, 2,346 doctors of dental surgery, 1,640 doctors of osteopathy and 670 doctors of podiatry.

* * * * *

PMS Occupational Health Award

The Vertol Division *of the Boeing Company, Delaware County, won the Pennsylvania Medical Society 1969 Occupational Health Award. Participating in the presentation ceremony are (left to right); Conrad A. Etzel, M.D., president, Delaware County Medical Society; F. William Sunderman, M.D., chairman, PMS Commission on Environmental Health; Lawrence Mellon, M.D., division medical director for Boeing, and Mr. H. Kelly Burroughs, vice president-administration, Boeing Vertol Division. Boeing's Vertol Division was also the recipient of the Delaware County Medical Society Occupational Health Award. The award is presented annually to companies which provide outstanding medical services and health programs for employees.*

New Construction To Aid Retarded, Geriatric Patients

The General State Authority has announced plans to construct a new facility to provide treatment, education and housing care for 500 mentally retarded children on U. S. Route One in Philadelphia County. The southeastern state school-hospital, slated for completion in May of 1972, will include an administration building, education and therapeutic activities buildings, clinical unit and a diagnostic clinic for outpatient evaluations. The almost $13 million institution will include one-story dwelling units to house the patients.

At the same time the GSA announced the renovation of Building Three at South Mountain Geriatric Center, Franklin County. Renovations to the existing structure will include rebuilding restroom facilities and laundry room, installation of an elevator and partial air-conditioning.

Recipients, Providers To Advise Council

Public Needs, Problems To Be Studied

Medical assistance recipients, as well as providers of medical care and professional community organizations that furnish the medically needy with care and services, will work with the Department of Public Welfare in formulating program recommendations through a recently organized Medical Assistance Advisory Council.

The council, which also includes legislators and state health and welfare officials, replaces the former medical care advisory committee of the Department of Public Welfare. William G. Ridgway, M.D., Akron, represents the Pennsylvania Medical Society on the council.

Addressing the recent organizational meeting of the group, Secretary of Public Welfare Stanley A. Miller urged the council, together with the Department of Public Welfare, "to pool their specialized knowledge, explore possibilities jointly, and together formulate recommendations for the program and practice.

"We need comprehensive viewpoints and specialized knowledge to plan the Medical Assistance Program, to interpret it to professional groups and the public, to consider problems encountered in the program and the needs of the public," he added.

In addition to promoting and interpreting the goals of the program, the council will make recommendations on the standards, quality and cost of medical services, personnel and facilities. It will help identify unmet needs in medical and maintenance areas; make recommendations on methods of implementing requirements relating to new or expanded services under the Medical Assistance Program; advise on administrative and fiscal matters, and recommend ways in which needed medical services of all types can be made available most effectively and economically to the program recipients.

Alfred C. Kraft, M.D., commissioner, office of medical services and facilities, is acting chairman of the Council. Dr. Joseph Adlestein, M.D., deputy secretary for mental health and retardation; Elias S. Cohen, commissioner, office of family services, and Glenn Johnson, medical assistance administrator, are ex-officio members.

* * * * *

PMS Urges Audio, Visual Screening

The Pennsylvania Medical Society, in conjunction with a representative number of interested organizations, has sent to all county medical societies in the Commonwealth a kit outlining details necessary for establishing preschool screening for hearing and visual acuity. It is designed to help establish a program in areas where none exist, and to improve present programs where such improvement is deemed necessary. The main purpose of the program is to uncover abnormalities easily corrected if discovered early in life.

Sponsored by the PMS Council on Education and Science with special assistance from the Pennsylvania Academy of Ophthalmology and Otolaryngology, the project has the cooperation of the following agencies: Pennsylvania Association for the Blind, the Pennsylvania Chapter of the American Academy of Pediatrics, Pennsylvania Department of Health, Pennsylvania Department of Education, The Easter Seal Society for Crippled Children and Adults of Pennsylvania, Pennsylvania Academy of General Practice, and the sixty county medical societies of the Commonwealth.

The Task Force on Pre-School Survey of Vision and Hearing of the Pennsylvania Medical Society has included in the kits being mailed to county society officers all the materials necessary for conducting the pre-school survey, including publicity materials, ideas for attracting lay volunteers and copies of the Pre-School Vision Screening Guide of the Pennsylvania Association for the Blind. The county societies will be responsible for implementing the program in the state, in conjunction with school and health department officials.

New Air Control Regions Named

Three new areas in Pennsylvania have been designated air quality control regions, John T. Middleton, commissioner of the National Air Pollution Control Administration, has announced. They are part of a group of an additional thirty-four areas added to the original fifty-seven which were the largest and most polluted urban communities in the nation.

The three new areas in Pennsylvania are Erie; Allentown-Bethlehem-Easton (including Phillipsburg, N. J.) and Sharon, which is included in the Youngstown-Warren, Ohio region.

Pittsburgh and Philadelphia were among the first fifty-seven air quality control regions named by the federal government.

States are responsible for setting air quality standards for any portion of their territory that is included in an air quality control region, and are responsible for developing and carrying out plans for implementation and enforcement of the standards. The air quality standards adopted by the states must meet the air quality criteria established by the Clean Air Act. Pennsylvania's standards, which were submitted to the National Air Pollution Control Commission after public hearings, are stronger than minimums established by the federal government. These standards will apply to the newly designated areas, according to the national act.

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Cooperation Sought in PHS Study On X-radiation Population Exposure

The U. S. Public Health Service last month began a national study to obtain information on population exposure to diagnostic and therapeutic X-radiation.

The study, which was planned with the advice of a group of radiologists and physicists representing the American College of Radiology and is being made jointly by the Bureau of Radiological Health and the National Center for Health Statistics, has an ultimate aim of establishing guidelines for future activities.

The study began in April with a household interview survey of a representative sample of the U.S. population. During its course, several thousand physicians, dentists and other practitioners will be requested to provide specific information on X-ray procedures and treatments reported in the household survey.

Since the study is based on a small sample, cooperation of members of health professions is essential.

The 1970 study will use the same collection and analysis methods employed in the 1964 survey so that results of the investigations will be directly comparable. This will afford the opportunity to evaluate the effectiveness of programs to improve X-ray practice and reduce unnecessary exposure. The 1970 study also will aid in establishing guidelines for future programs.

The new study will be conducted in three phases: 1. A household interview survey to obtain the X-ray visit experience of a representative sample of the U.S. population. This phase will run from April 13 through October 12 and will cover about 20,000 households and 65,000 persons; 2. A followup questionnaire to obtain examination data from X-ray facilities identified in the household survey. From May through December, approximately 5,000 facilities will be asked to supply these details. Authorization to request the information will be obtained in advance from household respondents; 3. An X-ray equipment survey to provide physical measurements in a selected sub-sample of X-ray facilities. This phase will be conducted by specially trained state and federal radiological health personnel.

Health Council Hears Call for Improved Care for Poor

The State Board of Public Welfare has suggested revitalization of the Governor's Hospital Study Commission to help hold down spiraling health care costs, State Secretary of Public Welfare Stanley A. Miller told the annual meeting of Pennsylvania Health Council.

Among the tasks proposed for the commission, Secretary Miller said, are extension and development of broad scale alternatives to hospitalization, a systematic state-wide study to come up with a plan for health manpower needs, and the establishment of a uniform cost accounting system.

Secretary Miller said that through the governor's ghetto-based branch offices "hundreds of barely articulate people have told us of instance after instance of shabby medical care and indifferent hospital attention. Many more have struck our complacency with descriptions of living conditions which, to middle class Pennsylvanians, are beyond belief.

The public welfare secretary said the "crisis in health care" and "our ruined environment" call for continuing improvement of the public-private partnership in provision of health care services. "Now, as at no other time, is that cooperative link important. For the very foundations of our health programs are being buffeted.

He said he is concerned about "our fragmented approach to health problems" and cited "half a hundred health related activities of the Commonwealth," which range from programs to encourage good nutrition to provision of lifelong care for the chronically ill.

Fragmentation, he said, "is the result of the zeal of advocate groups which push for their special interest without concern for, or knowledge of, the inter-relatedness of programs." This situation, he declared, is compounded by some 170 federal grant-in-aid programs for human services "pushed without regard for each other and without knowledge or state and local requirements."

He told the council it is in a position to "stand guard to protect the best of our present health services from the in-roads of bureaucracy."

Students form Society

The students in the graduate program in health administration at Temple University, Philadelphia, have formed a health administration society to build cooperation and closer communication between faculty, students, and all professionals in the health care field.

The objective of the new group is to reduce intraprofessional isolation by establishing experimental projects and programs in which all components of the health team cooperate for maximum effectiveness.

Children's Heart, Jeff Associate

Children's Heart Hospital of Philadelphia, a well-known institution for the care and rehabilitation of chronically ill children, came under the jurisdiction of the Thomas Jefferson University Hospital, Department of Pediatrics, last March.

Mr. James M. Anderson, president of the board of Children's Heart Hospital and a trustee of Thomas Jefferson University, commenting on the change, said, "The goal of Children's Heart Hospital is to get our children back to normal living. An important part of this, besides medical treatment, is to provide a homelike environment, educational opportunity and optimum rehabilitation facilities. We are confident that this close association with Jefferson will better enable us achieve these goals."

The name of the hospital will remain the same and the institution will be known as the Children's Heart Hospital of Philadelphia, a division of Thomas Jefferson University Hospital.

Health Care Reforms Object of U. Pa. Grant

Aiming at reform of health care in the inner-city, the New York-based philanthropic Commonwealth Fund has awarded a $600,000 grant to the University of Pennsylvania School of Medicine.

The grant will enable the school to strengthen its department of community medicine, through which the university's resources in the social, management, and medical sciences will be brought to bear on devising and operating new urban health care programs.

In announcing the grant, Quigg Newton, president of the fund, said the grant by the fund is "in response to the widely shared conviction that the dangerous deterioration and breakdown of medical and hospital services in cities across the country must somehow be reversed."

The University of Pennsylvania is joining an important group of similar institutions that have received assistance from the fund to meet this challenge and participate in the "long, difficult task of leading the reform of urban health care."

At the University of Pennsylvania, the department of community medicine is playing a key role in assisting the medical staff of Penn's Graduate Hospital with its plan to reorganize as a group practice that can offer comprehensive family care on a pre-payment basis to as many as 50,000 poor and affluent residents of adjoining neighborhoods in south Philadelphia.

In addition, faculty in the community medicine department are participating with other departments and components of the university in serving a west Philadelphia consortium that includes community leaders, Penn officials, and representatives of other health and medical institutions in the area. The ultimate goal is to plan and develop the full range of health and medical services needed by west Philadelphia's 400,000 residents.

Penn's department of community medicine will use its community-based projects to provide medical students and fellows with educational and research opportunities dealing with actual problems and issues of urban health care. Penn's department, in cooperation with the University's Wharton School of Finance and Commerce, has just launched a graduate program in health services administration.

* * * * *

With The "Pill" Comes Warning Leaflet

The Food and Drug Administration has announced plans to require that a warning leaflet be included in every package of birth control pills.

"I have come to the conclusion that the information being supplied to the patients in the case of the oral contraceptive is insufficient and that a study of our present policies is in order," FDA Commissioner Charles C. Edwards, M.D., told the Senate Monopoly Subcommittee at one of its public hearings on side-effects of birth control pills.

A proposed draft of the warning leaflet states that "there is a definite association between blood-clotting disorders and the use of oral contraceptive."

It emphasizes the importance of reporting any side-effects to "your doctor."

An American Medical Association spokesman questioned the tone of the language of the FDA's draft of the leaflet.

"In general, it is a good idea to have a package insert but the text of the FDA proposal raises serious question about the relationship between doctor and patient," he said. "It puts the full responsibility on the physician, but oral contraceptives generally are prescribed more as a convenience to a patient than as a medication. The patient must share responsibility both morally and legally and be alerted to her own responsibility."

The FDA now requires that pharmaceutical manufacturers only warn physicians and pharmacists of side-effects and possible hazards of taking birth control pills.

IRS Tightens Controls On Medicaid Providers; Payment Report Required

States will be required to report to the Internal Revenue Service aggregate amounts paid to providers of medicaid services, in accordance with new interim regulations issued by the Department of Health, Education, and Welfare, Mary E. Switzer, administrator of the social and rehabilitation service has said.

Each year, states will file Internal Revenue Service Forms 1096 and 1099 giving amounts paid to physicians, dentists, pharmacists, opticians, nursing homes, hospitals and other individuals and institutions, that provide service to Medicaid patients.

States will be required to identify each individual provider of service by social security number, and partnerships and corporations by an employer identification number.

States must also establish procedures for verifying with recipients whether services billed by providers were actually received. Such verification may be made by spot checking.

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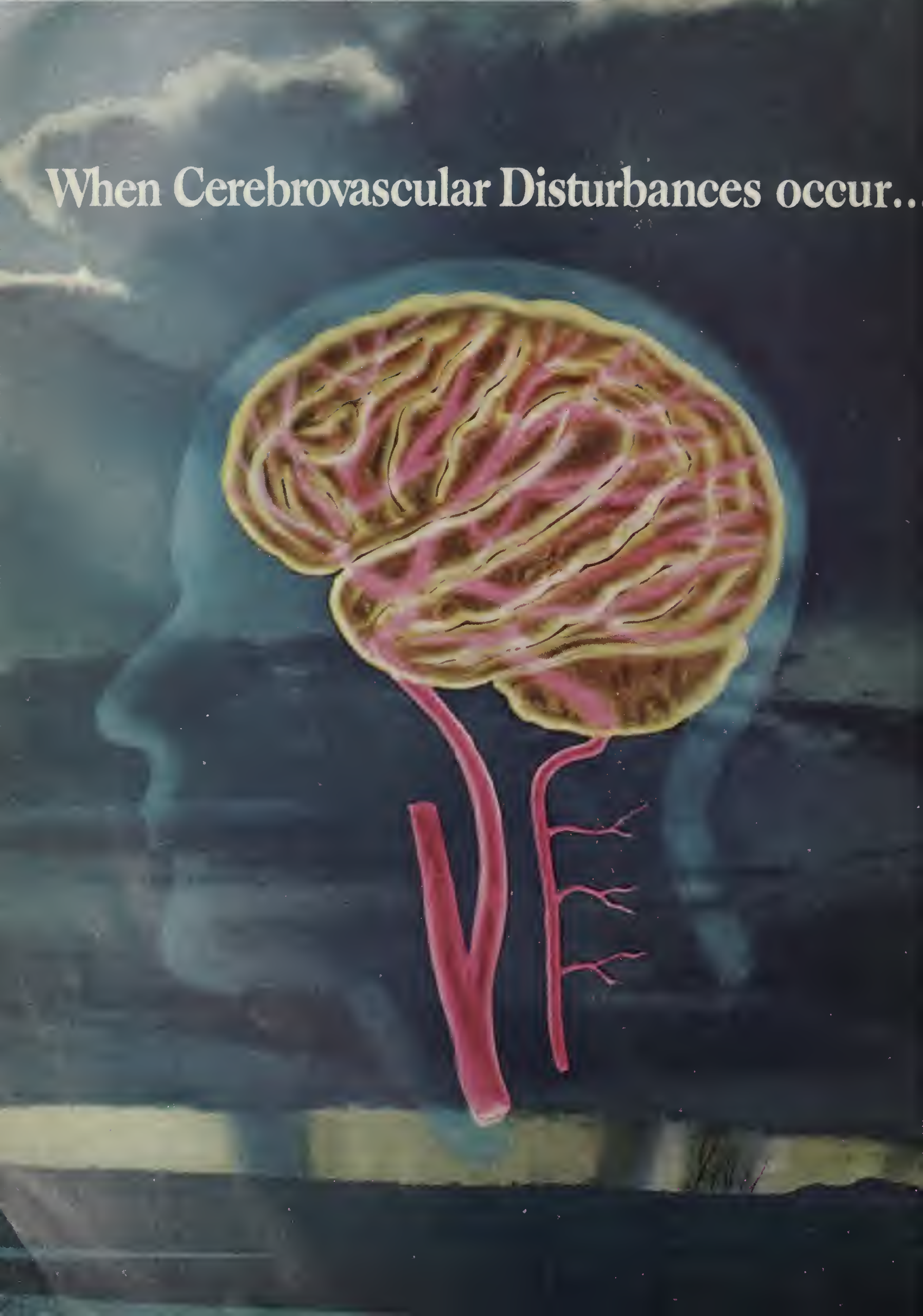
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Although not all clinicians agree on the value of vasodilators in vascular disease,[1] several investigators[2-5] have reported favorably on the effects of isoxsuprine on cerebral blood flow. Effects have been demonstrated both by objective measurement[2,5] and observation of clinical improvement.[2-4]

Indications: Cerebrovascular insufficiency, arteriosclerosis obliterans, diabetic vascular diseases, thromboangiitis obliterans (Buerger's disease), Raynaud's disease, postphlebitic conditions, acroparesthesia, frostbite syndrome and ulcers of the extremities (arteriosclerotic, diabetic, thrombotic). **Composition:** VASODĪLAN tablets, isoxsuprine hydrochloride 10 mg. and 20 mg. **Dosage:** Oral—10 to 20 mg. t.i.d. or q.i.d. **Contraindications and Cautions:** There are no known contraindications to recommended oral dosage. Do not give immediately postpartum or in the presence of arterial bleeding. **Side Effects:** Occasional palpitation and dizziness can usually be controlled by dosage reduction. As intramuscular administration of 10 mg. or more may cause brief hypotension and tachycardia, single intramuscular doses exceeding this amount are not recommended. Complete details available in product brochure from Mead Johnson Laboratories. **References:** (1) Fazekas, J. F.; Alman, R. W.; Ticktin, H. E.; Ehrmantraut, W. R., and Savarese, C. J.: Angiology *15*:No. 2 (Feb.) 1964. (2) Horton, G. E., and Johnson, P. C., Jr.: Angiology *15*:70-74 (Feb.) 1964. (3) Clarkson, I. S., and LePere, D. M.: Angiology *11*:190-192 (June) 1960. (4) Dhrymiotis, A. D., and Whittier, J. R.: Curr. Ther. Res. 4:124-128 (April) 1962. (5) Whittier, J. R.: Angiology *15*:82-87 (Feb.) 1964. © 1970 MEAD JOHNSON & COMPANY • EVANSVILLE, INDIANA 47721 75970

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Dr. Bortz, AMA Past President, Dies At Lankanau

Edward L. Bortz, M.D., Bala Cynwyd, a past president of the American Medical Association and one of the nation's leading authorities on geriatrics, died February 24, 1970, at Lankanau Hospital, where he had been a staff member for forty-four years, serving as chief of medical service "B" for three decades. He was the hospital's senior consultant in medicine and consultant to the aging research project at the time of his death.

Dr. Bortz served as president of the AMA in 1947-48. He had served also as president of the American Geriatrics Society and the Philadelphia County Medical Society. Dr. Bortz was a proponent of preventive medicine, and wrote and lectured widely on the importance of acquiring sound health habits. He was opposed to total retirement, and promoted the idea of second careers and community involvement for senior citizens. Until his death at age 74, he continued in private practice and pursued an active writing and lecturing career. He was a member of the White House Commission on the Aging and served as a panel chairman at the recent White House Conference on Food, Nutrition and Health.

Dr. Bortz served during World War I as a pilot in the U. S. Army Air Corps, and was a captain in the U. S. Navy Medical Corps, serving with the Marines on Iwo Jima and in the atomic bomb area of Nagasaki, Japan.

Dr. Bortz was recipient of many honors and awards during his life, including an award from the American Medical Writers Association for outstanding contributions to medical literature. The native Pennsylvanian, born in Greensburg, also received the meritorious service medal of the Commonwealth.

He is survived by his wife and his son, Walter M. Bortz, M.D., Phila.

PMS Calls for Interpretation on Commitment

PMS President William A. Barrett last month, at the direction of the Board of Trustees, urged Pennsylvania's Attorney General William G. Sennett "that the intent of Section 404 (of the Mental Health/Mental Retardation Act of 1966) again be literally interpreted to permit a protesting patient to be committed on the signatures of two physicians.

Dr. Barrett's letter said the restrictions currently in effect, particularly where the patient refuses to be admitted to a hospital, on the use of Section 404 are based "not on actual court decisions but on an interpretation of the alleged legal climate by the Department of Justice."

The letter continued: "Because of these restrictions, the urgent treatment of many cases has been unnecessarily delayed. Undue hardships have been placed upon physicians, families, hospitals (both mental and general), and even police due to these delays. For example, on February 23, 1970, William A. Limburger, M.D., president-elect of the Pennsylvania Medical Society, wrote to Dr. Adlestein, deputy secretary of mental health and mental retardation, as follows: 'I recently found it necessary to commit one of my patients for psychiatric care and learned that the procedure for commitment had been changed, for persons protesting emergency admissions. My patient was not willing to sign the necessary papers and refused all medication. A period of seventeen days elapsed between the time I deemed hospitalization necessary and the date set by the court for hearing the petition for commitment. This delay, associated with the court procedure, places a burden either on the family or a local hospital to keep the patient until a proper commitment is authorized.' Comprehensive mental health centers, hospitals, and other agencies charged or dedicated to assisting the mentally ill are increasingly unable to fulfill their obligations."

The letter concluded, "Commitment for treatment, when deemed necessary by two qualified physicians, should be available immediately. Legal redress should be provided within this framework, and should not impose hardships on persons, facilities or communities unable to cope with protesting patients awaiting the decision of already overcrowded courts."

Rocky Mountain Spotted Fever On Increase in the State

Health Department officials have reported that 365 cases of Rocky Mountain Spotted Fever have been reported in Pennsylvania since that disease was first recognized in this State in 1930. Last year, alone, twenty-five cases were reported in this State.

The disease, which is transmitted to man primarily by the bite of a dog tick, generally occurs from April until fall, during warm weather months. The earliest date of onset recorded was April 6.

W. D. Schrack, Jr., M.D., director of the department's division of communicable diseases, said, "Recognition of the disease or the possibility for the disease is important because without treatment about one person in five will die." He added that the disease is characterized by sudden onset with fever, headache, chills and conjunctivitis. A rash may also appear about the third day. The illness begins some three to ten days after the tick bite.

In the eastern part of the United States, Rocky Mountain Spotted Fever is primarily a disease in children, who are the most likely to be exposed to tick bites, but the disease may occur at any age.

Dr. Schrack said that Rocky Mountain Spotted Fever vaccine is available and is recommended for those persons at high risk to exposure to tick bites and for laboratory workers. Booster doses of the vaccine at early intervals are necessary.

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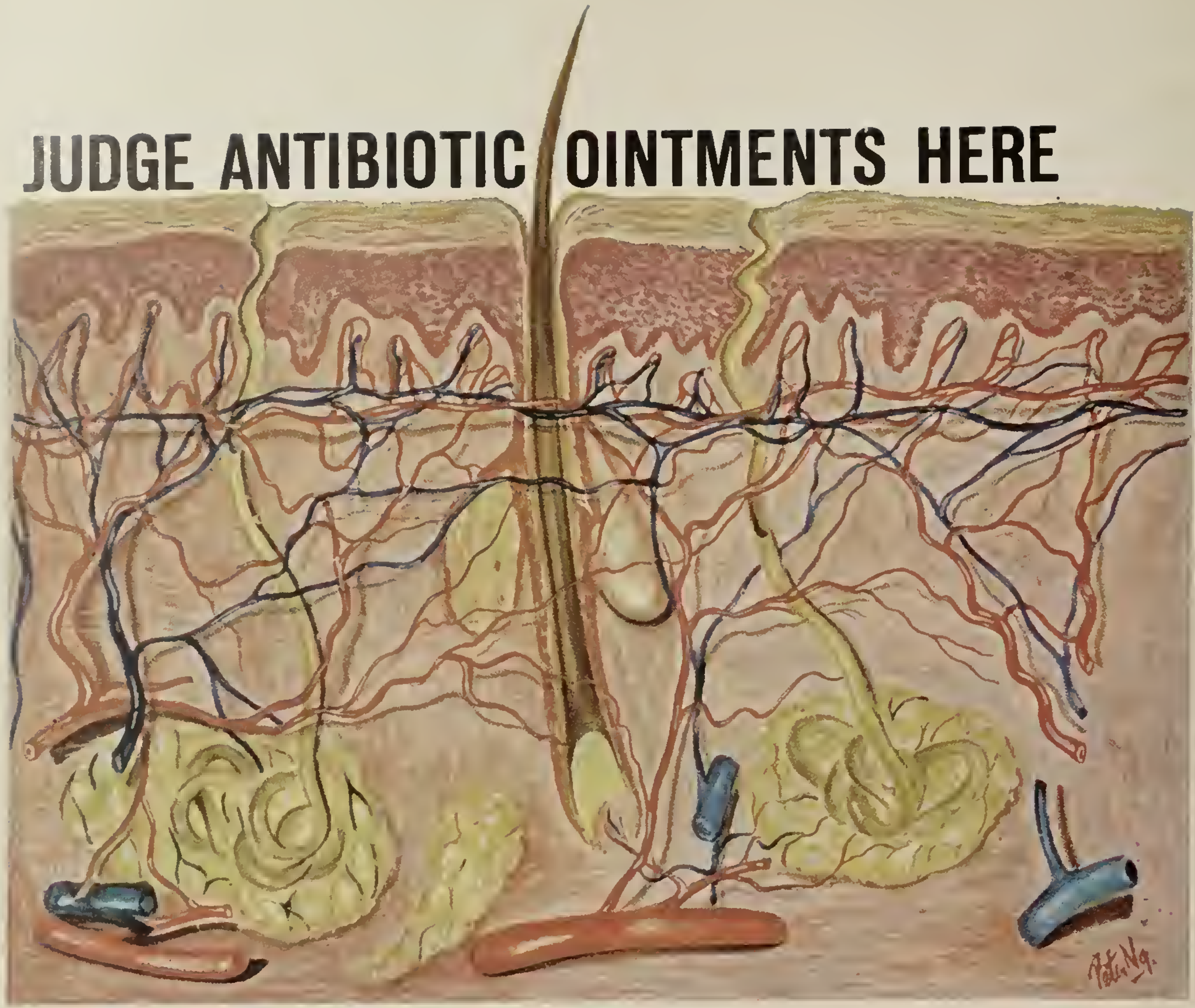

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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.
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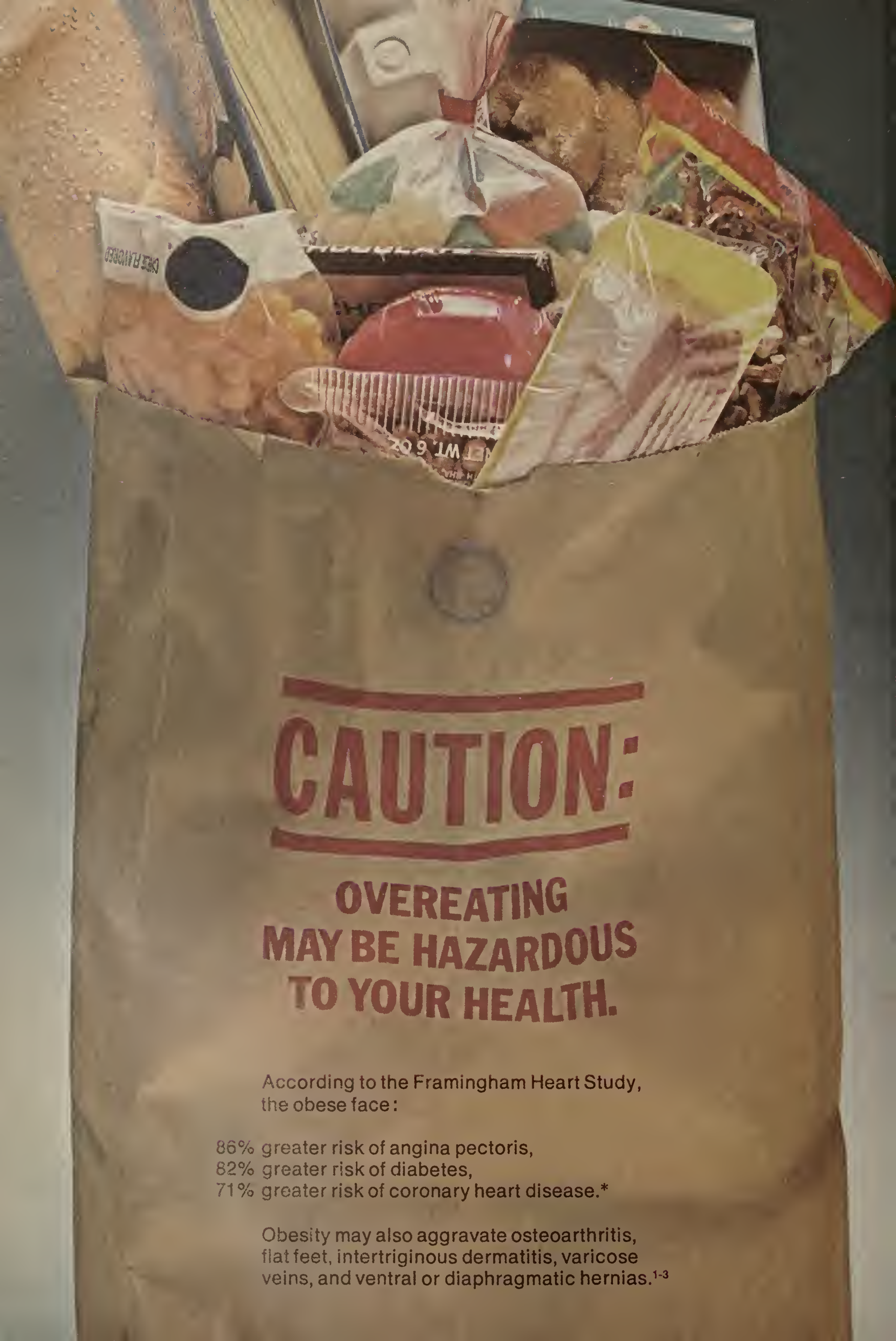

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86% greater risk of angina pectoris,
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71% greater risk of coronary heart disease.*

Obesity may also aggravate osteoarthritis, flat feet, intertriginous dermatitis, varicose veins, and ventral or diaphragmatic hernias.[1-3]

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One Endurets tablet after breakfast. It helps reduce weight and costs, conveniently.

For contraindications, warning, precautions, and adverse reactions, please see the full prescribing information.
It is summarized on this page.

Where there's no will there's a therapeutic way.

*Among persons 20% or more overweight as compared with median weight for persons of like height and sex.

1. Kannel, W.B., *et al.*: *Circulation* 35:734, 1967.
2. Thomas, H.E., Jr., *et al.*: *Med. Times* 95:1099, 1967.
3. Albrink, M.J., in: Beeson, P.B. & McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Phila.: W.B. Saunders Co., 1967.

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Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).

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Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.

Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.

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Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by midmorning.

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close-up/MD's

Willard A. Krehl, M.D., Ph.D., has been appointed professor and chairman of the department of preventive medicine at the Jefferson Medical College, Thomas Jefferson University, it was announced recently by **William F. Kellow, M.D.,** dean and vice-president. Dr. Krehl, who assumed his duties February 1, comes to Jefferson from the University of Iowa College of Medicine where he was professor of internal medicine and coordinator of the Iowa Regional Medical Program for heart disease, cancer and stroke.

Philip K. Hensel, M.D., Camp Hill, a general practitioner for fourteen years, recently was admitted to the practice of law in Dauphin County, and has joined the law firm of Hurwitz, Klein, Benjamin and Angino in Harrisburg. He studied for his law degree at Dickinson School of Law, Carlisle, and was graduated in June of 1969. He did his undergraduate studies and attended medical school at the University of Virginia.

DR. HENSEL

At the annual meeting of the Pennsylvania Cancer Coordinating Committee held in the headquarters building of the Pennsylvania Medical Society in Lemoyne, Pennsylvania on November 16, 1969, **Charles A. Waltman, M.D.,** of Easton was elected chairman and **Hugh R. Gilmore, Jr., M.D.,** of the Pennsylvania Department of Health, Harrisburg, was elected secretary. The Cancer Coordinating Committee is composed of representatives of the Pennsylvania and Philadelphia Divisions of the American Cancer Society, the Pennsylvania Medical Society, the Pennsylvania Department of Health, the Pennsylvania Dental and Osteopathic Associations and the Wainwright Tumor Clinic Association. The committee coordinates the cancer control activities of these various organizations.

Philip Tannenbaum, M.D., Philadelphia, has been appointed associate director of development in research and development for Smith Kline & French Laboratories. Dr. Tannenbaum joined the Philadelphia manufacturer of prescription medicines and other health-related products in 1962 as a clinical research investigator. In 1967 he was named associate director of clinical pharmacology and the following year became associate director of clinical investigation.

William D. Erickson, M.D., has joined the permanent staff of Geisinger Medical Center as an associate in the department of pediatrics. He and his family have moved to Danville from Jamestown, North Dakota, where he has been in private practice for the past two years. He served his residency at Mayo Clinic, Rochester, Minn.

Frederick C. Robinson, M.D., has been appointed an associate in the department of neurology at Geisinger Medical Center, Danville. Until his recent discharge from the U.S. Army, he was serving as assistant chief of neurology service, with the rank of a major at Brooke General Hospital, Brooke Army Medical Center, San Antonio, Texas.

Irving H. Itkin, M.D., formerly chief, department of asthma-allergy, National Jewish Hospital and Research Center, Denver, Colo., has been named head of the section of clinical immunology and professor of medicine at the Hahnemann Medical College and Hospital of Philadelphia.

S. Philip Bralow, M.D., has been appointed professor of medicine at Jefferson Medical College and Coordinator of Jefferson service at Philadelphia General Hospital, it was announced by **Robert I. Wise, M.D.,** Magee Professor of Medicine and chairman of the department at Jefferson Medical College, Thomas Jefferson University.

DR. SCHEIE

The Governor's Committee of 100,000 Pennsylvanians has presented the 1969 Award for Excellence in the Life Sciences to **Harold G. Scheie, M.D., F.A.C.S.,** of the University of Pennsylvania Hospital and Medical School. Although born in South Dakota and a graduate of the University of Minnesota Medical School, Dr. Scheie has been affiliated with the University of Pennsylvania since 1935 when he began his internship, and later his residency and graduate study, including a Doctor of Science in Medicine in 1940. Dr. Scheie is chairman of the medical board for the University of Pennsylvania Hospital; chairman and professor, department of ophthalmology, division of graduate medicine and the William F. Norris and George E. de-Schweinitz professor of ophthalmology; and chairman of the ophthalmology department of the University of Pennsylvania School of Medicine. He is also a practicing ophthalmologist with a private practice limited to diseases of the eye. In addition, Dr. Scheie is chief of the ophthalmology service at Philadelphia General Hospital, Children's Hospital of Philadelphia and chief and consultant at Veteran's Administration Hospital.

Roy L. Titchworth, M.D., specialist in internal medicine and cardio-pulmonary diseases, today was named chairman of the newly enlarged Allegheny County Board of Health. He succeeds **Gerald P. Hammill, M.D.,** who held an interim appointment as board chairman until the new election scheduled this month. Dr. Titchworth whose special interest is the relationship of heart and lung diseases to air pollution, has served as consultant to the Pennsylvania Health Department in studying lung disorders among coal miners.

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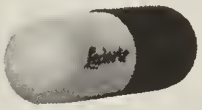

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Although the 18th Pennsylvania Health Conference is nearly two months away, we want you to know that there will be one, and a good one, on June 14, 15 and 16 at the Penn Harris Motor Inn, Camp Hill, Pa. The conference, with the theme of "Health Manpower in the '70s," will be sponsored this year by the nine agencies of the Pennsylvania Health Conference Committee, which includes the Pennsylvania Medical Society. Members at this moment are making the final arrangements for an outstanding program in which national experts in the pressing problem of health manpower will participate. You will be receiving more information later, but we ask you now to note the dates, tell your associates, and plan to attend. We promise you a stimulating and enjoyable experience.

close-up/MD's

WELCOME, NEW MEMBERS!

These M.D.'s have joined the State Society in recent months:

PHILADELPHIA COUNTY:

Rohlo A. Ardizone, M.D., 1900 Spruce St., Philadelphia 19103.

Alfred A. Gellhorn, M.D., 2225 DeLacey St., Philadelphia 19103.

Frederick B. Glaser, M.D., 321 Bala Ave., Bala Cynwyd 19004.

Frank A. Gregor, M.D., 2601 Holme Ave., Philadelphia 19152.

Guiseppe Gumina, M.D., 1627 Mohican St., Philadelphia 19138.

Joseph D. McGeary, M.D., Fidelity Mutual Insurance Co., Philadelphia 19101.

Severin Teufel, M.D., 3400 Spruce St., Philadelphia 19104.

WARREN COUNTY:

James P. Markham, M.D., Box 55, N. Warren 16365.

WASHINGTON COUNTY:

Emira D. Zubchevich, M.D., P. O. Box 61, Beallsville 15313.

Alfred L. Sorensen, M.D., 212 E. McMurray Rd., McMurray 15317.

WAYNE-PIKE COUNTY:

Marilyn T. Pardine, M.D., 1310 Main St., Honesdale 18431.

WESTMORELAND COUNTY:

John E. Dubnansky, M.D., 314 S. Hickory St., Scottdale 15683.

Raul A. Olave, M.D., 5 Charlotte Ave.—Summit, Irwin 15642.

Joseph J. Voytek, M.D., 607 Mellon Bank Bldg., Latrobe 16560.

YORK COUNTY:

Malcolm H. Sawyer, M.D., Caterpillar Tractor Co., Box 787, York 17045.

Francis G. Huber, M.D., 117 W. Main St., Dallastown 17313.
William O. Rexrode, M.D., York Hospital, York, 17405.

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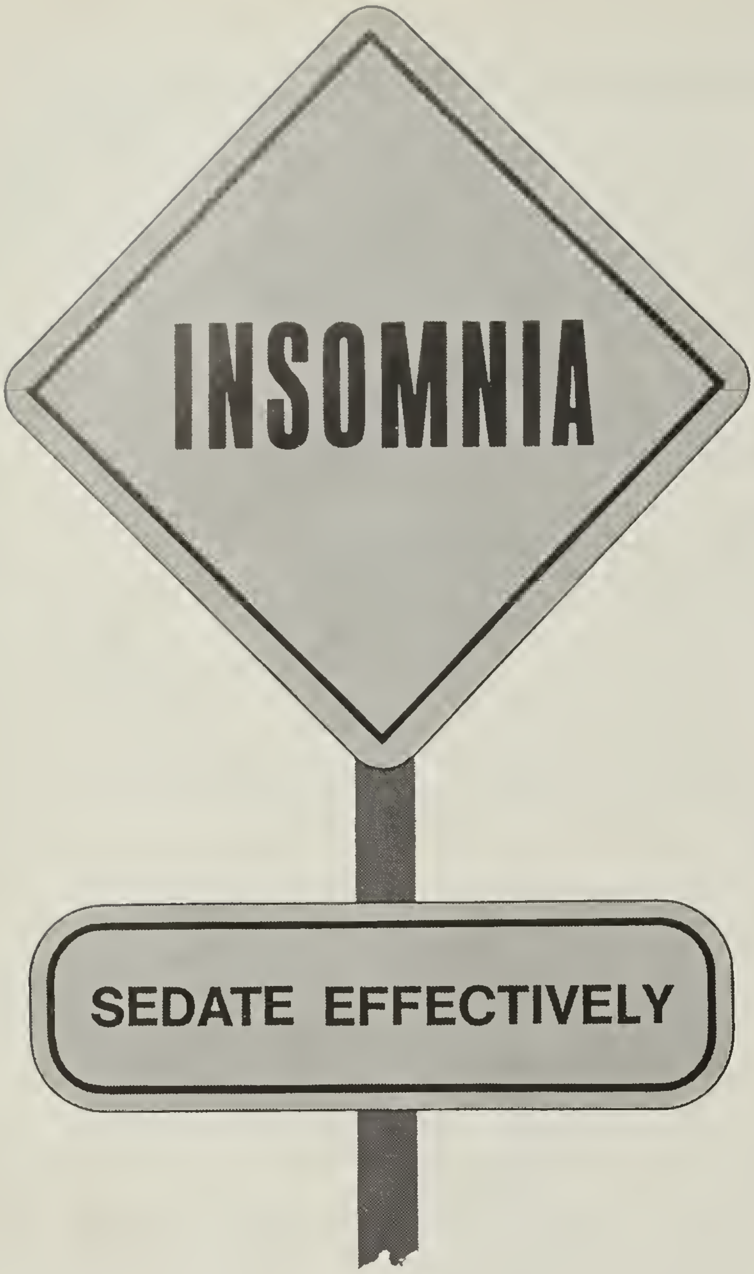

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In the State

Recent Actions Raise Questions

Act No. 10, 1970, enabling certain minors to consent to medical, dental and health services, has raised some questions which reading the exact wording of the General Assembly Act, as signed by the governor, will answer. The text follows:

AN ACT

HB 775

Enabling certain minors to consent to medical, dental and health services, declaring consent unnecessary under certain circumstances.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Individual Consent - Any minor who is eighteen years of age or older, or has graduated from high school, or has married, or has been pregnant, may give effective consent to medical, dental and health services for himself or herself, and the consent of no other person shall be necessary.

Section 2. Consent for Children with Minor Parents - Any minor who has been married or has borne a child may give effective consent to medical, dental and health services for his or her child.

Section 3. Pregnancy, Venereal Disease and Other Reportable Diseases - Any minor may give effective consent for medical and health services to determine the presence of or to treat pregnancy, and venereal disease and other diseases reportable under the act of April 23, 1956 (P.L.1510), known as the "Disease Prevention and Control Law of 1955," and the consent of no other person shall be necessary.

Section 4. When Consent Unnecessary - Medical, dental and health services may be rendered to minors of any age without the consent of a parent or legal guardian when, in the physician's judgment, an attempt to secure consent would result in delay of treatment which would increase the risk to the minor's life or health.

Section 5. Liability for Rendering Services - The consent of a minor who professes to be, but is not a minor whose consent alone is effective to medical, dental and health services shall be deemed effective without the consent of the minor's parent or legal guardian, if the physician or other person relied in good faith upon the representations of the minor.

APPROVED - The 13th day of February, A. D. 1970.

RAYMOND P. SHAFER

capitol report

ANATOMICAL GIFTS ACT

Standard procedures have not yet been developed to nsure optimum use of donated bodies and body parts following the adoption of the Uniform Anatomical Gifts Act. Guidelines resulting from a late April conference on the matter are expected. Meanwhile an individual may donate his body or body parts to an individual physician, who may be at a loss as to how to proceed until the proper steps are made known. Best procedure at present is to contact the State Anatomical Board, 257 S. Sixteenth St., Philadelphia. Telephone (215) 735-0668.

METHADONE USE RULES A MONTH AWAY

It will be at least a month before regulations governing the use of methadone in the treatment of heroin addiction will be approved. The recently passed legislation allows for the use of methadone and allows for a licensed practitioner to prescribe such drugs at clinics, hospitals, or other institutions designated by the secretary of health. Meanwhile, physicians throughout the state are receiving questions and requests for help through methadone.

It is expected that the regulations will authorize general hospitals, through emergency and outpatient departments, to establish clinics for the treatment of addicts with methadone. Questions regarding the establishment of such a facility should be addressed to Ellsworth R. Browneller, M.D., Health and Welfare Bldg., Room 802, Harrisburg, Pa. 17120.

In the Nation

Cure the Ravaged Environment

April 22 was earth day in the United States. Throughout the nation, especially on college campuses, important steps were taken to alert the population that unless the airs and waters are cleansed, the species homo sapiens might well become extinct, the cause being suicide by pollution.

The cost of achieving the gigantic "earth-cleaning" is tremendous – inestimable at this point. But it is recognized as a high priority matter.

Senate Bill 3466, an administration bill with bi-partisan support, would set air quality standards for the nation, provide for intensified research in air pollution, and for strong enforcement procedures.

Clean waters legislation is receiving equal attention.

An important bill was introduced recently in the Senate by Minority Leader Hugh Scott of Pennsylvania, whose Senate Bill 2388 would establish an Environmental Quality Administration. The bill, if passed, would consolidate the hundreds of existing programs designed to improve the environment into three basic divisions: Air Pollution Control, Water Pollution Control and Solid Waste Disposal. The bill, if passed, could speed solutions to the problems at less cost.

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A highly-flavored and palatable tablet of yellow phenolphthalein, bismuth subcarbonate, bismuth subgallate in special base. Chewable. Bottles of 35 and 100. Adult Dose: Chew 1 or 2 tablets night or morning. Children (up to age 10): ½ tablet. A citrus drink taken with tablet will stimulate action.
PRECAUTION: Do not use when symptoms of appendicitis are present and discontinue use if skin rash appears. Dependence on laxatives can result from continued use.

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PENNSYLVANIA MEDICINE **editorials**

Time for the County Society

"How to Live on Twenty-Four Hours a Day" is the title of a fine and useful little book by Arnold Bennett. As might be expected from so thoughtful an author the book does not give instructions for inserting more hours into your day. If its message can be epitomized we might say that it points out that each of us gets twenty-four hours every day and that the great trick lies in what we put into them.

This is a subject of interest to doctors who have far too much to do in every twenty-four hours. Demands are made upon us from many sides and we can fall into many errors in the budgeting of our most precious asset—time. It is obvious that we must be critical in allotting our energies and other resources among our two dozen hours every day. We may otherwise emphasize one facet of our life at the expense of something indispensible.

One aspect of this is that a physician may become so deeply engrossed in his work at his hospital and in its medical staff affairs as to neglect the wider field of his county medical society. Similarly, involvement in the practice and affairs of a specialty may lead a doctor to fall away from attendance at the county society meetings.

We would like to make some complaining remarks about this error. But first we must say that we are not going to complain about the practitioner who neglects his society in order to indulge a penchant for riotous living. We feel that any attempt to make the county society more attractive than *song* will fail, to say nothing of wine and women. No—our message has to do with the doctor who is so heavily involved in hospital staff work and possibly also in the affairs of his specialty that all his time is used up so that organized medicine is ignored. This doctor often defends his position by becoming an open opponent of our medical societies.

It is particularly difficult to take issue with this man about his conduct, since it arises from a sincere effort to improve the practice of patient care in his community. Indeed, it is hard to escape the fact that the hospital staff and the affairs of his specialty have a more *immediate* claim upon the doctor than his county society. Our contention is that the man who becomes exclusively involved in these labors is misappropriating his time. Withdrawal from participation in the larger medical world of the county society can only narrow his capabilities and injure his medical practice. The game may be lost while too much attention is being paid to one aspect of it. Our message is that doctors must allot their energies and resources thoughtfully and without prejudice, or carelessness.

We need to meet together in our medical societies as the physicians of the community, in order to round out our entire education and development. We need to see how we fit into the citizens' total effort. We need to remind ourselves that we must fit into the community team with other physicians, from other hospitals and other disciplines and other modes of supplying medical care.

One may also profit by looking at this problem as having short range and long range aspects. The rapid changes which have taken place in the hospital and in specialty practice have been and are very demanding and we have had to run hard to meet these changes. They are not only continuing but are accelerating. But while it is necessary to shift our position to meet the changes of our times, it is not wise to abandon the things of proved value from the old regime.

The unity of our profession, concord among its practitioners, the preservation and promotion of ethical standards, socio-economic problems, peer review, continuing education, relationships with government and many similar subjects are examples of proper concerns of the county society, as well as of our state and national organizations. They require the attention of practitioners. They lack the immediacy of demand which many hospital staff problem, have, but failure to heed them will be disastrous. The fellowship of the medical society is the means of meeting these issues.

These problems are not new, although they have modern applications. William Osler cited these objects of the New Hampshire Medical Association, published in 1788: "This Society was formed on the most liberal and generous principles, and was designed, first, to lay a foundation for the unanimity and friendship which is essential to the dignity and usefulness of the profession . . ." In an address in 1903 to celebrate the centennial of that society, Osler said that "The first and in some respects the most important function" of the local medical society is "to lay a foundation for that unity and friendship which is essential to the dignity and usefulness of the profession." Words of wisdom to be heeded now as then. We can ill afford in the press of modern times to let these principles falter.

CBL

I love my family.
I adore this house.
My in-laws are great.
The neighbors are wonderful.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties

Contraindications History of sensitivity to meprobamate.

Important Precautions. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated). Doses above 2400 mg./day are not recommended.

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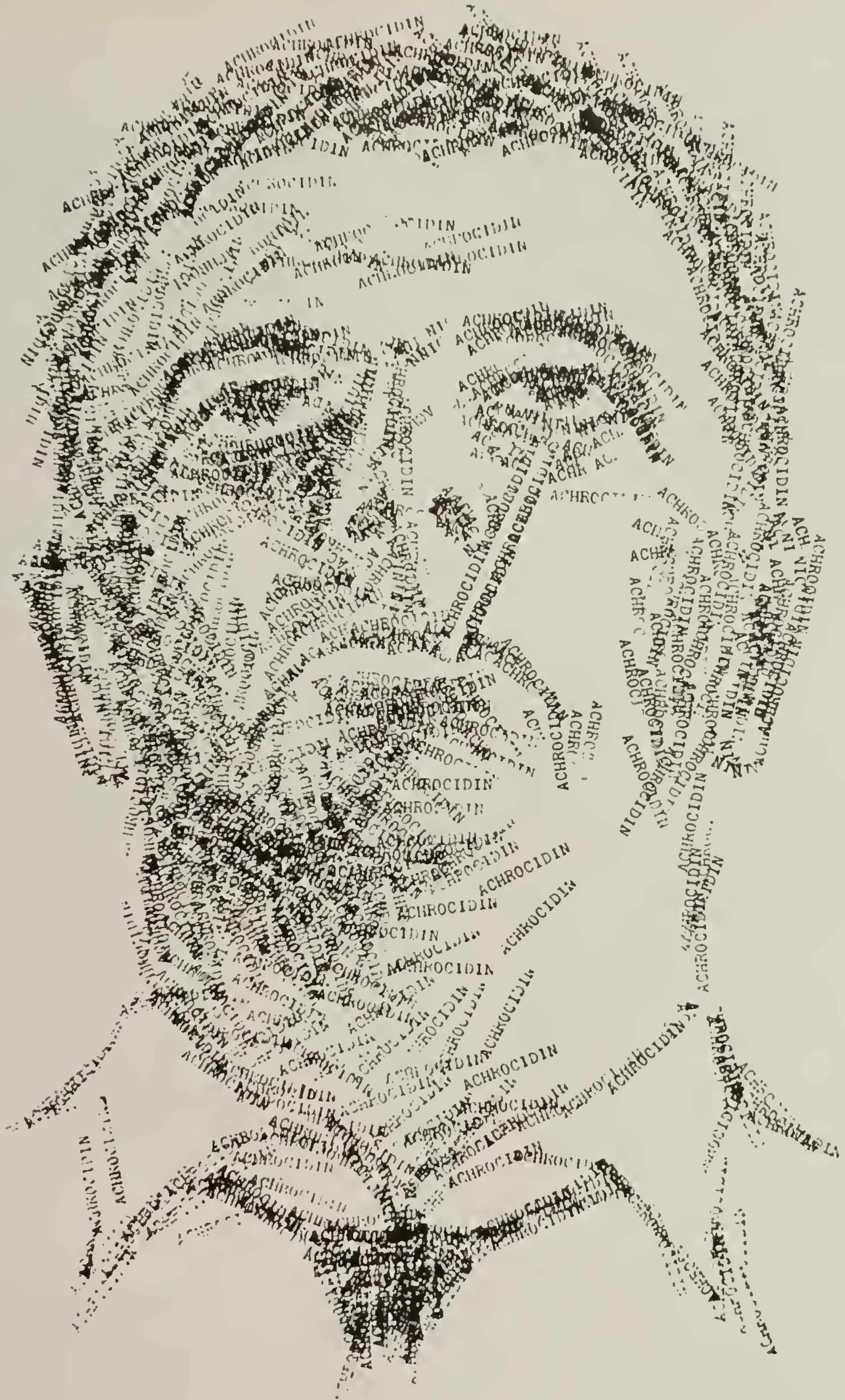

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Contraindications: Hypersensitivity to any component.
Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.
Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).
Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.
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PENNSYLVANIA MEDICINE original papers

A Tumor Embolus Causing Infarction of Small Bowel

by
HARRY G. LIGHT, M.D.
Bethlehem

A tumor embolus of sufficient size to occlude a major artery is extremely rare. When identified, the origin usually is a primary or secondary tumor of the lung, with invasion of a pulmonary vein.

This is a case of a tumor embolus to the superior mesenteric artery. It is unusual in that the embolus caused acute occlusion of the arterial supply, producing infarction of a segment of ileum. It is also unusual in that this was an embolus of Hodgkin's lymphoman cells without recognizable pulmonary involvement.

Case Report

J. B.—A fifty-eight year old man was admitted to St. Luke's Hospital on September 5, 1965 with a chief complaint of abdominal pain of four days duration. This began in the paraumbilical area and was associated with nausea, vomiting, and diarrhea. The patient was seen by his family doctor and was treated for an "intestinal virus." When the pain persisted, became more severe, and was localized in the right lower quadrant, the patient was admitted to the hospital with a diagnosis of acute appendicitis.

Past history noted a previous admission for depression in April 1964. At that time he was noted to have a mild hypertension and was treated with Reserpine 0.1 mg. per day. A chest x-ray during that admission showed nothing abnormal. Aside from depression, he had been in good general health and denied any recent weight loss.

On physical examination of the present admission, the patient was well-developed, well-nourished and appeared in acute distress. He was dehydrated with evidence of vasoconstriction. Blood pressure was 160/100 mm. Hg., Pulse 128 per minute, respirations 20 per minute and temperature 37.8°C. The bowel sounds were absent. The abdomen was distended and quite tender throughout. There was increased tenderness in the right lower quadrant. On rectal examination there was good sphincter tone and tenderness on both sides. The rest of the physical examination was within normal limits.

The fluid and electrolyte deficits were corrected and a laparotomy was performed on the day of admission. At

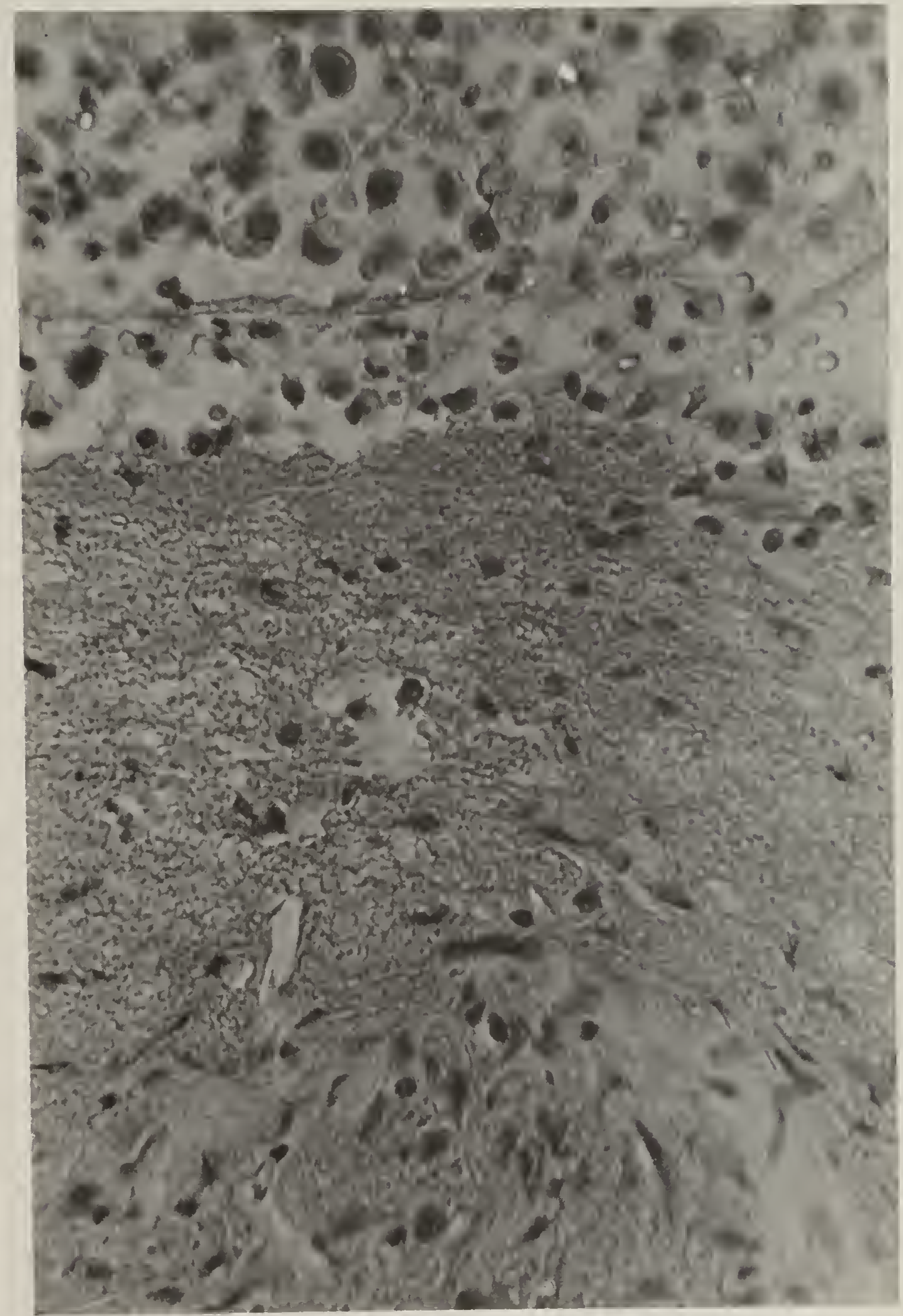

Figure 1 – *Microscopic view of organizing thrombus about a tumor embolus composed of Reed-Sternberg cells.*

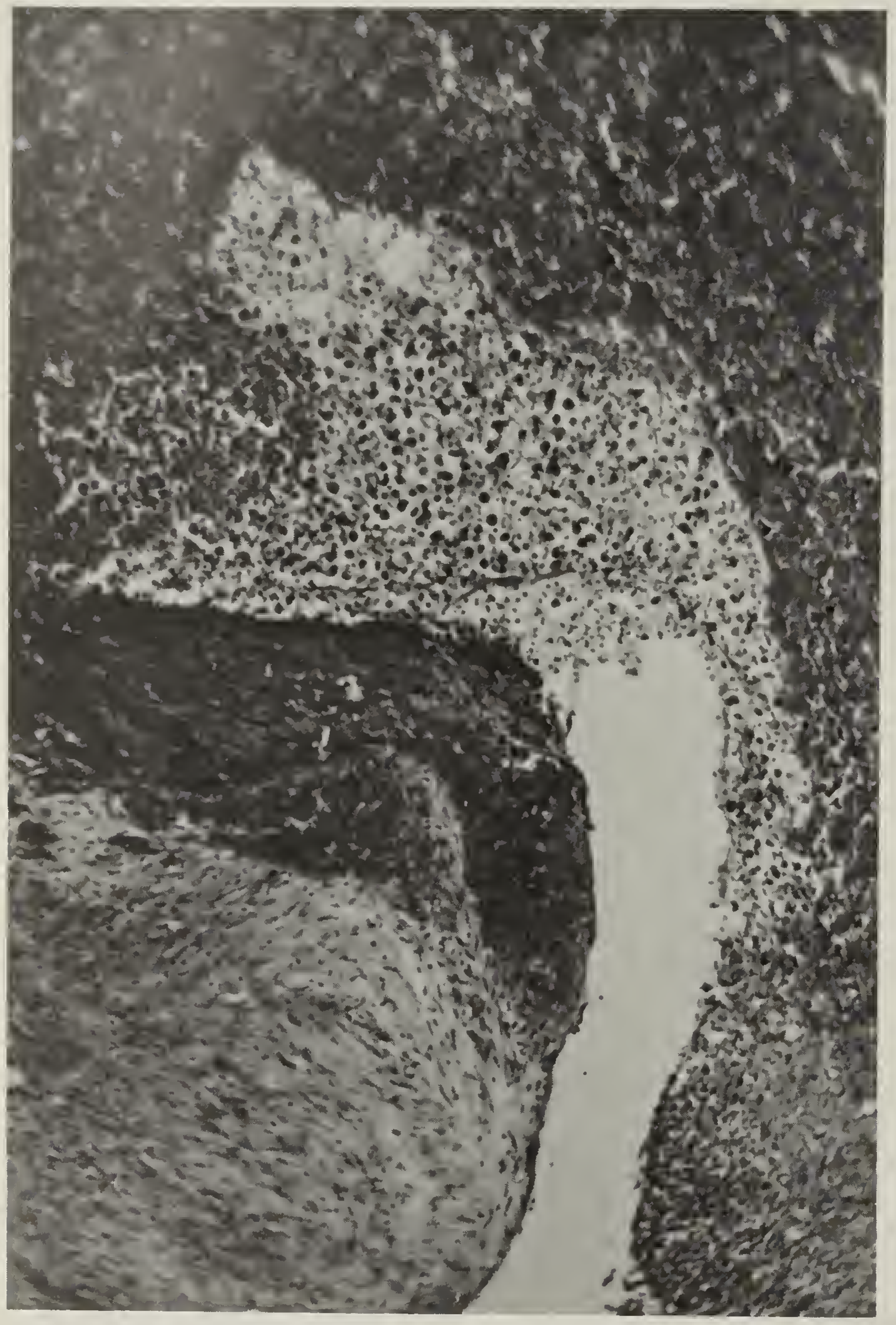

Figure 2 – *Microscopic section through wall of superior mesenteric artery showing tumor embolus with associated thrombus formation.*

operation the terminal ileum was found to be gangrenous, due to occlusion of the mid-portion of the superior mesenteric artery. A resection of the infarcted small bowel was performed, followed by end-to-end anastomosis.

There was no evidence of intra-abdominal malignancy. Exploration of the abdomen was limited due to peritonitis and the presence of gangrenous small bowel.

Pathologic examination of the infarcted ileum demonstrated vascular occlusion by an unsuspected organizing thrombus developing about an embolus composed of large undifferentiated neoplastic cells. (Figures 1 and 2) There was no evidence of lymph node involvement adjacent to the vascular occlusion with extension through the arterial wall.

The post-operative course was complicated by a fistula at the anastomosis. After four weeks of conservative measures to close the fistula, a by-pass procedure through a small incision in the right upper quadrant was carried out. The fistula soon closed and his nutrition improved.

As his general condition improved, the origin of the tumor embolus was investigated. On the initial chest x-ray, there was widening of the right side of the mediastinum. (Figure 3) A right scalene node excision was performed and was not diagnostic. Because his general condition contraindicated exploratory thoracotomy, a course of empiric radiotherapy was given to the mediastinal mass as it appeared to be the logical origin of his tumor embolus.

The patient was discharged from the hospital to continue his course of radiotherapy as an out-patient. On Decem-

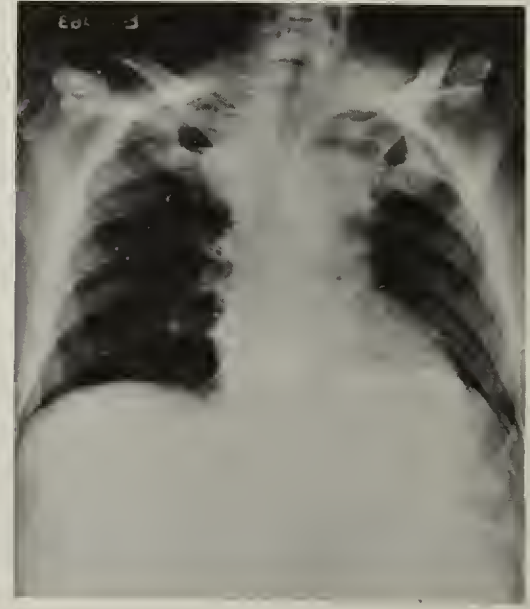

Figure 3 – *Chest x-ray on admission showing widening of the right superior mediastinum. The lung fields are clear.*

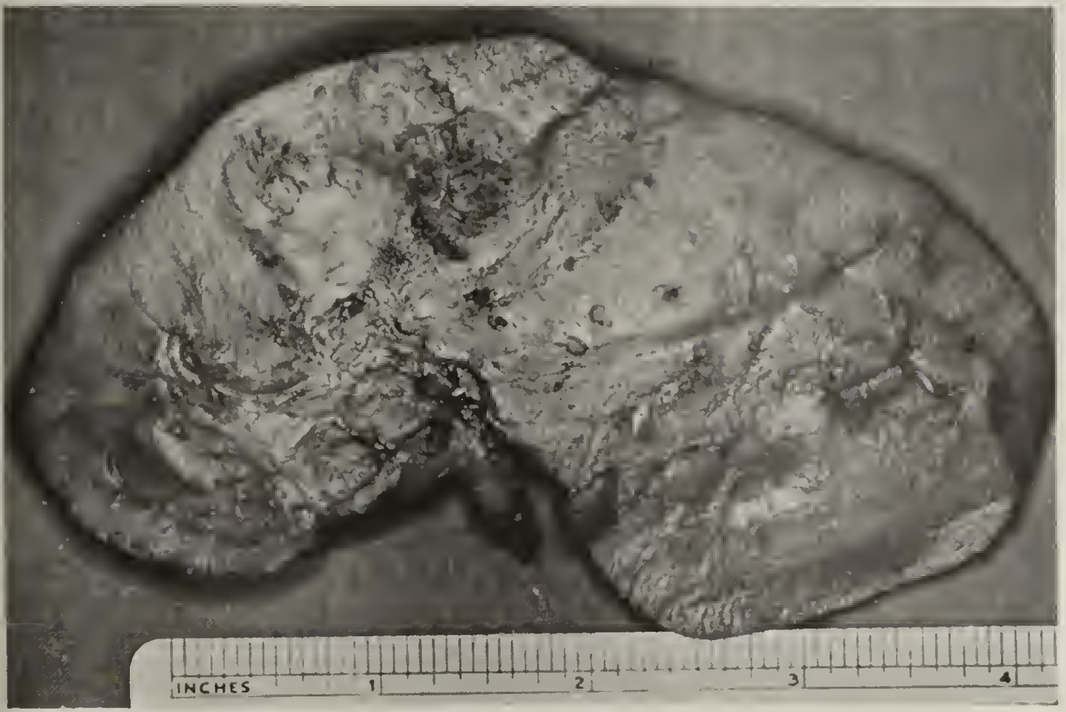

Figure 4 – *Photograph of cut surface of right kidney showing tumor mass of Hodgkin's lymphoma in the superior pole.*

ber 3, 1965, the patient became mentally confused, exhibited an emotional change, and noted anorexia. Six days later he had a convulsion and was hospitalized. On examination, there was evidence of increased intracranial pressure and signs of cerebral metastases were detected. The patient expired on December 27, 1965.

At autopsy, multiple cerebral metastases were noted. The right sided mediastinal mass proved to be a substernal benign goiter. There was no metastasis in either lung but there was reactivation of old arrested apical tuberculosis. The foramen ovale of the heart was closed precluding a shunt of embolic cells from the venous to arterial circulation by that route. The liver, spleen and multiple lymph nodes were involved with a Hodgkin's lymphoma. The upper pole of the right kidney contained a discrete tumor of Hodgkin's lymphoma measuring 4 cm. × 4 cm. [Figure 4]. This was the most prominent lesion noted at autopsy and might be the source of the tumor embolus.

Discussion

Superior mesenteric artery occlusion is rare. It may be caused by either thrombus or embolus. In reported cases, thrombosis at an area of arteriosclerotic stenosis appears to be the more common cause of occlusion, although, frequently the exact origin of the occlusion is not known at the time of operation or autopsy.

By far the most common source of embolus to the superior mesenteric artery is a mural thrombus associated with myocardinal infarction. Less commonly, the embolus is associated with rheumatic heart disease, subacute bacterial endocarditis, or plaques of atherosclerosis in the aorta.

A tumor embolus causing occlusion of a major artery must be extremely rare as I have not been able to find a reported case in the recent American literature. In this case, an embolus of Hodgkin's lymphoma cells lodged in the superior mesenteric artery and caused a sudden occlusion of the vessel with resultant gangrene of the dependent small intestine. Certainly, one would expect such an embolus to arise from the lung or from the heart itself if no functioning septal defect existed to permit a paradoxical embolus of sufficient size. It is difficult to conceive of metastatic tumor cells growing in the superior mesenteric artery on an arteriosclerotic plaque at a rate sufficient to cause occlusion with resultant infarction of the bowel without the development of collateral flow.

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Circulating cancer cells commonly pass through the lungs and cause systemic metastases without the development of pulmonary metastasis. This is a common occurrence clinically. Zeidman and Buss[5] demonstrated this experimentally by injecting tumor cells intravenously and noting systemic metastases without the development of pulmonary metastases.

From studies of the pulmonary circulation relating to shock, it is apparent, that arteriovenous shunts function to a greater extent. than previously recognized.[2,4] These may accomodate the passage of large clusters of tumor cells through the lungs. As more work is done, it is demonstrated, that circulating peripheral tumor cells occur more commonly than one would suspect from the evidence of metastasis. Rarely are tumor cells detected in aggregates of clinical significance. It is difficult to understand how a clump of metastatic cells large enough to cause occlusion of the superior mesenteric artery could pass through the lungs without evidence of established metastasis in the lungs. However, the fact speaks for itself. This case is being reported to emphasize this unusual aspect.

REFERENCES

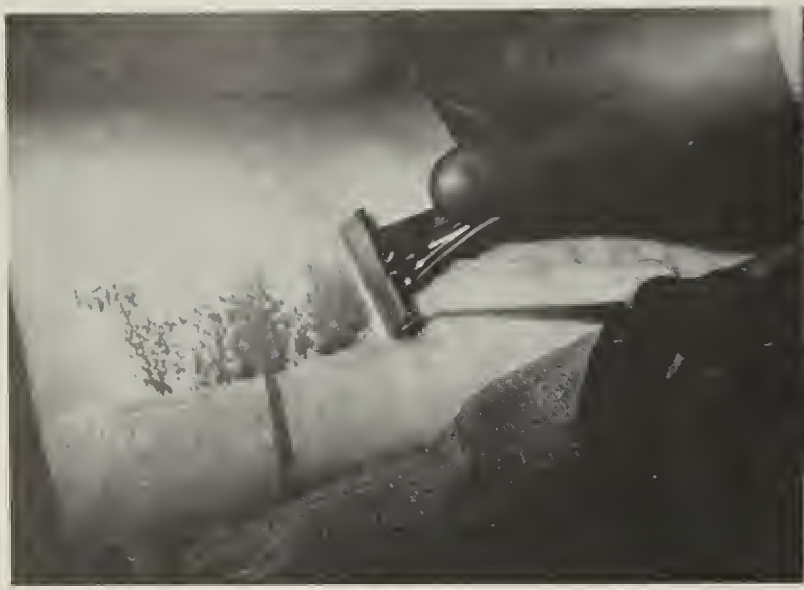
1. Engell, H. C.: Cancer Cells in Blood; 5 to 9 years follow-up study. Ann. Surg. 149: 457, 1959.

2. McLaughlin, J. S., Suddhimondalh, C., Mech, Jr., K., Llacer, R., Houston, J., Blide, R., Attar, S., Cowley, R. A.: Pulmonary Gas Exchange in Shock in Humans. Ann. Surg. 169: 42, 1969.

3. Moore, G. E., Sandberg, A., and Schuborg, J. R.: Clinical and Experimental Observation of the Occurrence and Fate of Tumor Cells in the Blood Stream. Ann. Surg., 146: 580, 1957.

4. Prinzmetal, M., Orvitz, E. M., Simkin, B., and Bergman, H. C.: Arterio-venous Anastomoses in Liver, Spleen, and Lungs. Am. J. Physiol., 152: 48, 1948.

5. Zeidman, I., and Buss, J. M.: Transpulmonary Passage of Tumor Cell Emboli. Cancer Res., 12: 731, 1952.



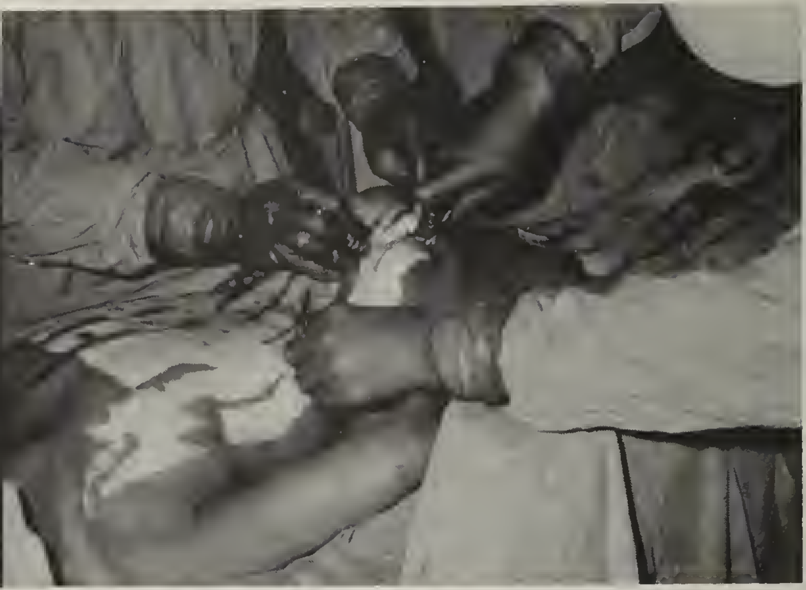


Figure 1: *The razor dermatome in use illustrating a medium thickness graft approximately 1¼ inches in width which can be obtained by this technique.* **Figure 2**: *Removal of skin from cadaver for allografting using Schick razor dermatome.*

A Simple Hand Dermatome

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Frequently it is necessary to take small areas of skin for grafting at times when the surgeon, either for convenience or because of the expense, would prefer not to use the free-hand knife (Ferris-Smith) or one of the mechanical dermatomes. At other times, emergency room procedures requiring small grafts could be more simply performed if a small dermatome were available in preference to the simple razor blade or No. 10 scalpel blade.

J. W. Snow* described the use of standard unmodified Schick ejector razor and blades for the taking of split thickness skin grafts of medium thickness. The only materials that are required are the standard unmodified Schick ejector razor (non-adjustable type) and blade dispenser with some type of material for lubricant.

This technique has had wide use in our hands with satisfying results. The instrument has proven of value in removing large quantities of skin from the areas of the body that are normally difficult to use for skin donor sites and for the harvesting of skin from cadavers when the body is located in an area that does not have suitable electrical outlets for powering the mechanical dermatomes. These grafts may be put through the mesh dermatome if desired to expand them as one would do with regular strips of skin.

The authors are from the Clinical Research Center and Department of Surgery, Graduate Hospital of the University of Pennsylvania and the Harrison Department of Surgical Research, University of Pennsylvania.

Sterilization of the razor and its blades is readily achieved by the use of either a cold solution with submergence of the handle and blades for an appropriate period of time or gas sterilization with the blades and instrument packaged.

The technique is quite simple. The razor is held next to the skin in the same position that one would hold it for shaving. The thickness of the graft taken is adjusted by the degree of pressure exerted by the operator and the tension applied by the assistant in traction on the skin. The grafts may be used immediately as autografts or refrigerated or frozen if prolonged storage is desired.

Summary

A simple hand held dermatome previously described by Snow has been widely used for a variety of purposes on a large plastic surgical service where the acquisition of skin grafts in instances in which it is either impossible or not desirable to utilize more conventional methods of taking the graft. It has been quite efficient and economical as well as dependable.

* Snow, J. W. Safety razor dermatome. Pl. & Recontsr. Surg. 41: 184, 1968.

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Actions—Ovulen acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note: Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen is indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis and pulmonary embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration, and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable. Retrospective studies in Great Britain and the United States have shown a statistically significant association between cerebral thrombosis and embolism and the use of oral contraceptives.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen. Therefore, if such tests are abnormal in a patient taking Ovulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives.

The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: **1.** Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651:657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

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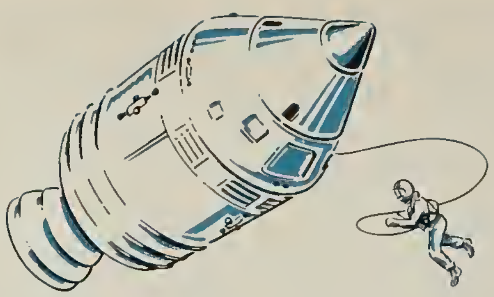

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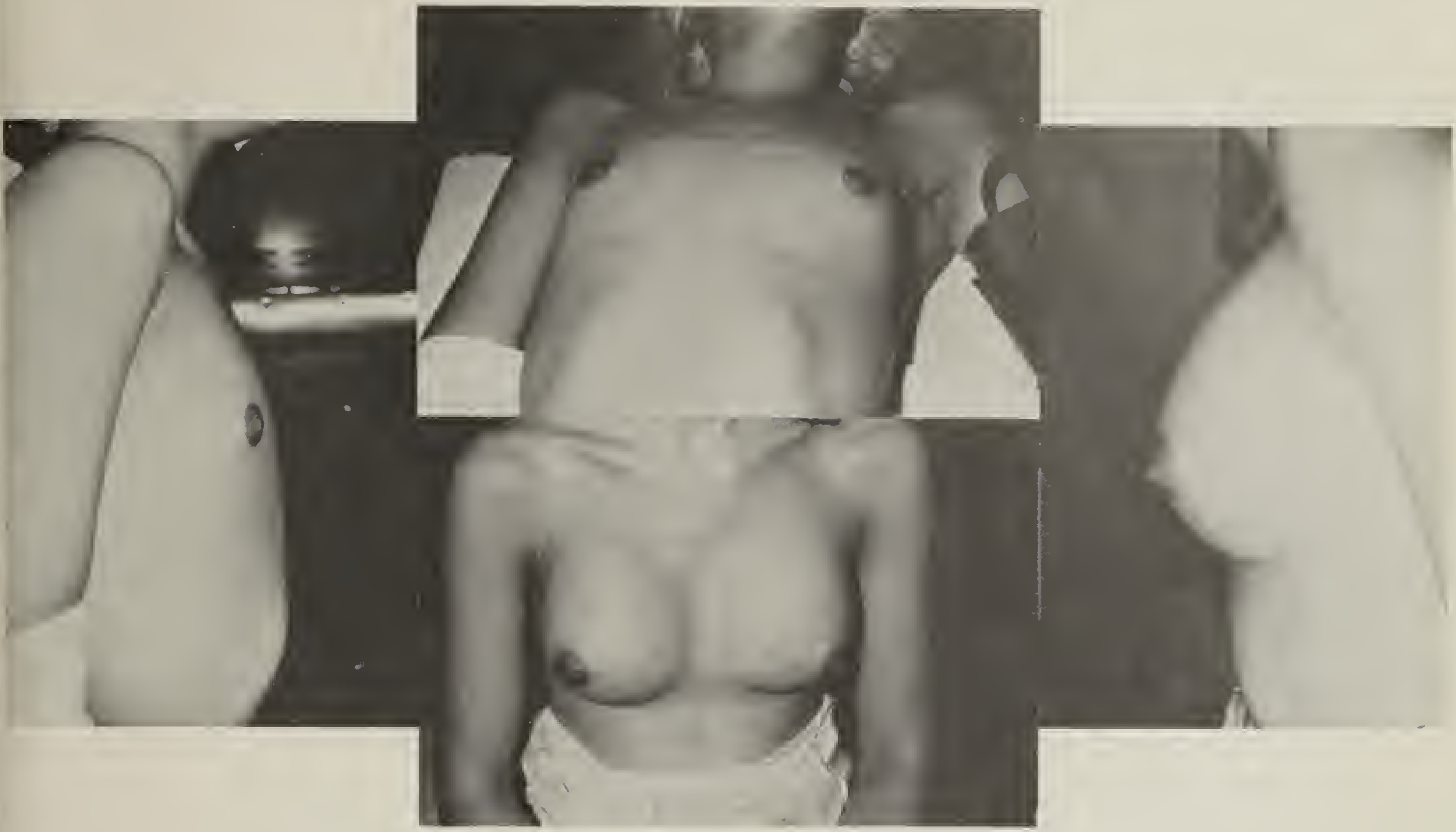


Augmentation Mammaplasty

FRANK M. TOOZE, M.D. and ROBERT J. DEMUTH, M.D.
Erie

Some of the unhappiest patients consulting today's plastic surgeons are women in the sexually active age group who are afflicted with mammary hypoplasia, for in today's mammary-oriented society an ample bustline is considered the sine qua non of feminine attractiveness. Many of the women seeking mammary augmentation have married, conceived, delivered and successfully nursed their offspring. The problem, therefore, is primarily a psychological one and in spite of having successfully attained the above feminine attributes women with flat chests exhibit feelings of inferiority, self-consciousness, depression, preoccupation and often sexual frigidity. All too frequently their aggravated emotions lead to matrimonial duress, separation, and divorce. It is not surprising, therefore, that the relatively safe augmentation procedures available today are increasingly in demand for the correction of mammary hypoplasia and micromastia. In fact, the success of our present silicon prostheses has now led many authors to advocate elective or prophylactic mastectomy with primary reconstruction for a wide variety of inflammatory, traumatic, and premalignant pathological states. The etiology of micromastia is wide and varied, ranging from aplasia or hyposplasia to mastectomy, postpartum involution and postweight reduction states.

Mammary Development

Mammary hypoplasia unrelated to local pathological disease, is better understood if one reviews the embryology of the developing mammary glands. Mammary development begins about the sixth week of intrauterine life. A bilateral linear ectodermal prominence develops and initially extends from the axilla to the pubis. As growth proceeds the major portion of this mammary ridge or milk line, undergoes involution leaving only the pectoral portion to develop into future mammary glands. By the fifth month of fetal development the apocrine-like glandular structures have achieved considerable growth and a series of cord-like ridges with bulbous ends are apparent. At about the seventh month the cord-like ridges develop lumina and form the lactiferous ducts which coalesce into an elevated nipple surrounded by the pigmented areola noted at birth. Further mammary development is then relative to general body growth until puberty. At this time estrogen stimulation produces a rapid enlargement of mammary gland substance and a concomitant interglandular deposition of fat. Soon the young, virginal, mammary gland is composed of fourteen to twenty firm lobules extending from the second to sixth ribs and from the peristernal margin to the anterior axillary line. A well-developed breast outline is noted to be elliptical, averaging ten to twelve centimeters in breadth and eight to ten centimeters in height. It protrudes from the anterior thoracic wall five and a half to six centimeters. In young girls the nipple is located at the fourth interspace. In primary mammary hypoplasia the glandular development and fat deposition does not take place, leaving instead a relatively flat bustline. The normal mammary gland substance is attached to the overlying skin by an encompassing connective tissue sheath which is frequently referred to as "the skin brassiere." Superiorly there is a peripheral thickening of fascia which acts like a suspensory ligament and is often referred to as Cooper's ligament. Posteriorly the mammary gland is covered by retromammary fat which forms a pseudo bursa between the gland and the pectoral fascia. The mammary blood supply is received primarily from the medial and lateral margins. Medially, the internal mammary artery and the second-through-fifth inter-costal arteries provide circulation, while laterally the pectoral branches of the thoraco-acromial artery and the lateral thoracic artery provide the main sources of blood supply. The anatomical location of these main arterial branches is of importance in the planning of incisions for reconstructive breast procedures.

Surgical Procedures

The many and complex psychosocial problems attending mammary hypoplasia has sparked the imagination of reconstructive surgeons for many years. The numerous and sometimes fatal complications attending many of the ingenious methods of breast augmentation have, however, spurred the continuing search for improved techniques that could be simply performed. Gersuny, in 1889, is generally credited with introducing percutaneous paraffin-injection mammary augmentation techniques. The resulting paraffinomas, granulomas and changes in shape and consistency of the breast implants led to the general abandonment of this technique. In 1945 Berson first reported the use of dermis fat grafts for mammary augmentation. This technique was enthusiastically received and subsequently championed by several authors including Bames and Watson. The idea of multiple operative sites and consequent scarring, up to 50 per cent postoperative absorption of the free fat material, and occasional chronic drainage secondary to fat necrosis, led to loss of enthusiasm for the procedure and search for improved techniques to overcome these shortcomings. In 1950 Maliniac described an augmentation procedure utilizing dermis fat pedicle flaps. This procedure overcame the disadvantages attending the use of free grafts and resulted in a breast of relatively normal size, contour, and consistency. This technique is of particular value in reconstructing the small ptotic breasts as advocated by Longacre. The procedure, however cannot be utilized for many individuals with severe hypoplasia or aplasia because of the concomitant lack of overlying breast tissue and skin cover. In 1949 Grindlay and Clagett sparked a clinical interest in the possible use of synthetic hypoplastic materials for use in mammary hypoplasia. Their initial laboratory experience was followed in 1951 by Pangman's reported experience with the use of a polyvinyl sponge (Ivalon) mammary augmentation prosthesis. This was followed shortly thereafter by reports on the use of a polyether polymer marketed under the tradename Etheron, and other polymer sponge materials including polyurethrane, and polyethylene. Although these substances received initial enthusiastic acceptance it soon became apparent that their use was fraught with several dire consequences. In three to six months following insertion there was a 30 to 50 per cent shrinkage of the implant, it frequently became stony-hard secondary to fibrous ingrowth, and seromas were frequent with concomitant drainage sinuses, local inflammation, and occasionally generalized sepsis. These complications frequently resulted in the implant material being extruded or removed for control of local wound drainage and inflammation. Partial collapse of the sponge material frequently led to dimpling or puckering of the overlying skin. In spite of the hazards attending the use of these sponge implant materials, their popularity continued until The 1963 International Plastic Surgery Congress where Cronin and Gerow presented their experience with a silicon gel (dimethyl polysiloxane) prosthesis encased within a silicon rubber envelope. The use of the Cronin prothesis has obviated many of the previous complications and disadvantages of sponge implant material. Specifically it does not allow ingrowth of fibrous connective tissue and therefore there is no shrinkage, changing in consistency, and imbibition of serum. Of further advantage is the sparse local tissue reaction. The dacron mesh backing allows local tissue fixation and firm adherence to the anterior chest wall. The above advantages plus the ready availability of eight preformed sizes has made the Cronin silastic mammary augmentation prosthesis the authors' favorite implant material for augmentation procedures in mammary hypoplasia. At the time of this writing rather extensive laboratory and clinical investigations by many investigators including Edgerton, Hoopes, Ashley, Rees and Goulian have failed to reveal any significant carcinogenic activity of silicone gel prostheses.

Silicones

The term silicone as coined by F. S. Kipping many years ago, refers to a class of organic polymers known as organo-polysiloxenes that possess many of the ideal tissue substitute qualities as defined by Scales. Specifically they are not physically modified by soft tissue, are chemically inert, do not elicit foreign body reaction or inflammation, are non-carcinogenic, do not induce allergic or hypersensitivity states, are capable of resisting mechanical strains, are capable of fabrication in the form desired and are able to be sterilized. Medically pure silicones in use today are composed of long chains, or polymers of silicon and oxygen atoms with the following structural formulation:

The silicones are available in many viscosities measured as centistokes. The centistoke (viscosity) of water being equal to one. Short chains (polymers) produce silicones of low viscosity, and correspondingly lengthening the chains produces silicones of increased viscosity In general the long chains of alternating silicon and oxygen atoms possess configurations similar to that of carbon atom chains found in naturally occurring oils and rubbers. The chemical bonding of silicon and carbon atoms does not, however, occur in nature. Blocksma has stressed four distinct clinical attributes possessed by medically pure grade silicones that contribute to their being the almost ideal non-autogènous tissue substitute. Specifically, they are heat stable, they are uneffected by time, do not adhere to tissue and do not promote tissue reaction.

This large family of chemically related organo-silicone compounds includes fluids, rubbers, gels, sponges, foams and resins. The dimethyl polysiloxane currently used in the Cronin prosthesis is a medically pure grade medical fluid, Dow Corning 360, in a semifluid silicone gel state with a specific gravity of 0.98. This compares very favorably with the 0.94 specific gravity of natural breast tissue. The silicone gel is encased in a thin walled silicone rubber envelope designed to approximate the softness, contour and fluid-like mobility of the normal human breast. The silicone utilized in fabrication of this prosthesis is marketed under the Dow Corning trade name of Silastic. Silcone rubber is produced by compounding fillers and heat vulcanizing agents with the silicone polymer. Medically pure grade silicone rubber is produced by utilization of dichlorobenzoylperoxide as the vulcanizing agent because this latter substance does not become part of the chemical molecule during vulcanization leaving the end product chemically pure.

Surgical Technique

The proper preparation of the Cronin silastic prosthesis is as important to a successful surgical outcome as is the proper surgical preparation of the patient. The prosthesis must be scrupulously clean and free of all powder granules, lint, soap and dust particles. Heat sterilization either in an autoclave or dry heat chamber is mandatory for silicones possess the property of absorbing cold sterilizing solutions and sterilizing gases. One then runs the risk of these materials being released following implantation serving as a nidus of local tissue irritation. Patient preparation for successful mammary augmentation procedures begins with daily Phisohex baths five days prior to hospital admission. The Phisohex shower is then administered on the evening of admission and the following day in the operating suite, a five minute Phisohex prep is followed by a Betadine prep and the usual sterile drapping technique. Bilateral symmetrical 2½ to 3½ inch incisions are then outlined with methylene blue along Thomas's submammary line. The incision is then carried down through the skin and subcutaneous tissue onto the pectoral fascia. The pseudo bursa separating the retromammary fat from the pectoral fascia is developed by blunt and sharp dissection until an adequate cavity has been created to receive the previously determined correct size Cronin silastic implant. It is well to avoid penetration of the pectoral fascia, for once one enters the pectoral musculature, the possibility for hematoma formation is increased. When the dissection has been completed and the meticulous hemostasis achieved, the prosthesis is inserted with the tapered end uppermost. In this regard it should be re-emphasized that as long as the implanted material is posterior to all breast tissue, the breast is readily available for periodic postoperative examination to rule out the possibility of tumor formation. The inframammary wound is then closed in stepwise layers to form an adequate support for the prosthesis. The skin margins are gently coapted with a running subcuticular suture of 5-0 nylon. The wounds are covered with a single layer of fine mesh gauze and a dry sterile compression dressing is applied utilizing firm pressure with a foam rubber pad across the superior portion of the prosthesis to prevent excessive prominence over the proximal portion of the implant. The new prosthesis design obviates the need for a compression dressing. Broad spectrum antibiotic coverage has been routinely used for the first ninety-six hours, and during this time the patient has been requested to minimize the use of the pectoral girdle musculature. On the fourth postoperative day the dressings are changed and the wounds examined for the presence of hematoma, seroma or local inflammation. We have only rarely experienced postoperative hematoma or seroma formation and these minor complications have been readily resolved following aspetic needle aspiration. A sterile compression dressing is then reapplied and the patient discharged to be followed in the office. We have routinely removed our subcuticular skin sutures on the seventh postoperative day and have reapplied a supporting pressure dressing until the fourteenth day when the patient is allowed to wear her own supporting bra. The patients in our series have tolerated this procedure very well and we have not been plagued with the list of complications that one reads about including venous thrombosis with nipple or areolar necrosis, Mondor's disease or superficial phlebitis of the breast skin, extrusion of the implant, or persistent hypesthesia. Patient acceptance of this technique has been most gratifying and we plan to continue utilizing this technique for mammary hypoplasia and certain types of micromastia until an improved technique becomes available. In this regard one must mention the percutaneous injection of the silicon fluids and in particular the Dow Corning medically pure fluid known as MDX4-4011. Although this relatively simple technique has many appealing advantages the Federal Food and Drug Administration specifically prohibits the use of this substance for mammary augmentation as delineated in a letter from Dow Corning Corporation dated September 20, 1967. Until the many unknowns attending the use of this material have been resolved, the regional lymph node accumulation, formation of generalized foci of fat atrophy as reported by Ben-Hur, plus the gravitational migration of injected liquid silicone makes the injudicious use of these materials inappropriate when relatively safe augmentation techniques are available.

REFERENCES

1. Ashley, F. L., Rees, T. S., Ballantine, D. L. Jr., Galloway, D., Machidair, Grazer, F., McConnell, D. V., Edington, T. and Kiskadden, W.: An Injection Technique for the Treatment of Facial Hemiatrophy. P. & R. S., 35:640-648, 1965.

2. Ballantyne, D. L., Rees, T. D. and Seidman, I.; Silicone Fluid: Response to Massive Subcutaneous Injections of Dimethyl Polysiloxane Fluid in Animals. P. & R. S. 25:330-338, 1965.

3. Bames, H. O.: Augmentation Mammoplasty by Lipo-transplant. P. & R. S. 11:404, 1953.

4. Bames, H. O.: Breast Malformation and a new approach to the problem of the small breast. P. & R. S. 5:499-411, June 1950.

5. Ben-Hur, N. and Neuman, Z.: Siliconoma - Another cutaneous response to Dimethylpolysiloxane, experimental study in mice. P. & R. S. 36:629-631, 1965.

6. Berson, M.: Derma-fat transplants used in building up the breasts. Surgery, 15:451, 1945.

7. Blocksma, R. and Braley, S.: The silicones in plastic surgery. P. & R. S. 35:366-367, 1965.

8. Conway, H. and Dietz, G. H.: Augmentation Mammoplasty. Surg. Gynec. & Obst. 114:573, 1962.

9. Conway, H., Smith, J.: Breast Plastic Surgery: Reduction mammaplasty, mastopexy, augmentation mammaplasty and mammary construction. P. & R. S. 21:8-14, January 1958.

10. Crinkelair, G. F. and Malton, D.: Mammoplasty and Occult Breast Malignancy. P. & R. S. 23:601, 1959.

11. Edgerton, M. T., McClary, A. R.: Augmentation mammaplasty, psychiatric implications and surgical indications (with special reference to the use of prelyvinyl alcohol sponge (Ivalon). P. & R. S. 21:279-305, April 1958.

12. Gillies, H. D., Marino, H.: The "periwinkle shell" principle in the treatment of the small ptotic breast. P. & R. S. 21:1-7, January 1958.

13. Grindley, J. H. and Clagett, O. T.: A plastic sponge prosthesis for use after pneumonectomy. Preliminary report of an experimental study. Proc. Staff Meet. Mayo Clinic. 24:538-539, 1949.

14. Gurdin, M. and Carlin, G. A.: Complications of Breast Implantations. P. & R. S. 40:530, 1967.

15. Longacre, J. J.: Correction of the hypoplastic breast with special reference to reconstruction of "nipple-type breast" with local dermo-fat pedicle flaps. P. & R. S. 14:431, 1954.

16. Maliniac, J. W.: Evaluation of Principal Mammaplastic Procedures. P. & R. S. 4:359-373, July 1949.

17. Maliniac, J. W.: Evaluation of Principal Mammaplastic Procedures. P. & R. S. 12:110, 1953.

18. Moore, A. M. and Brown, J. B.: Investigation of polyvinyl compounds for use as subcutaneous prostheses. P. & R. S. 10:453, 1952.

19. Personal Correspondence - Dow Corning Corporation, Midland, Michigan.

20. Rees, T. D.: The cancer question in mammaplasty in reconstructive plastic surgery edited by J. M. Converse, Vol. V, p 1935. W. B. Saunders Company, Philadelphia, 1964

21. Rees, T. D. Platt, J. and Ballantyne, D. L. Jr.: An investigation of cutaneous response to Dimethylpolysiloxane (silicone liquid) in animals and humans - A preliminary report. P. & R. S. 35:131-139, 1965.

22. Regnault, P. C.: Indications for breast augmentation. P. & R. S., 40:524, 1967.

23. Watson, J.: Some observations in free fat grafts with reference to their use in mammaplasty. Brit. J. P. S., 12:263-274, October, 1959.

Both Drs. Tooze and Demuth are graduates of the University of Rochester (New York) School of Medicine, and are engaged in the private practice of plastic surgery in Erie. They are members of the staffs of Hamot and St. Vincent Hospitals in that city.

Malpractice in the Emergency Room

– A MEDICAL DRAMA IN ONE ACT –

There is not a physician in America who has failed to read and become grossly absorbed in an article pertaining to malpractice. Since the great majority of practicing physicians are called upon to treat patients in the emergency room, it is possible that the malpractice threat has become concentrated in this area.

It is for this reason that the Pennsylvania Medical Society, in cooperation with the Pennsylvania Committee on Trauma, American College of Surgeons, and in co-sponsorship with the Pennsylvania Osteopathic Assn., Pennsylvania Dept. of Health, and Pennsylvania Dept. of Public Welfare, has entered the art of the theatre to tell a unique story.

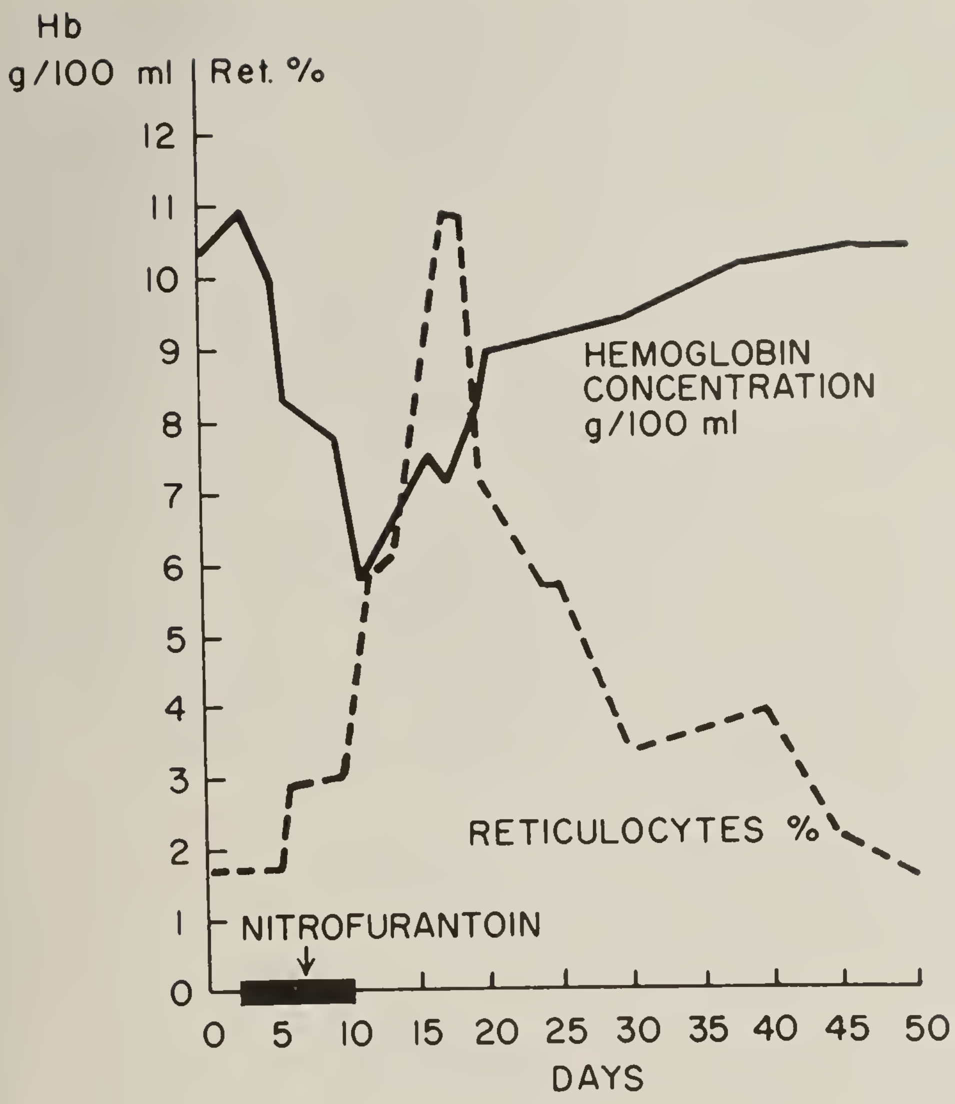
"Malpractice in the Emergency Room" is the title of a medical drama in one act, depicting a courtroom case history of malpractice involving the emergency room, the doctor and the law which is being presented throughout the Commonwealth.

Rather than didactic lectures, a case history is presented in typical courtroom fashion focusing on some of the more common errors of omission and commission in the emergency room. The case is discussed by several outstanding plaintiff and defendant attorneys in the field of malpractice in Pennsylvania. They include Philip K. Hensel, M.D., member of the medical-legal committee of Dauphin County Medical Society and guest lecturer and graduate of the Dickinson School of Law; Irwin Benjamin, Esq., partner in Benjamin and Angino, Harrisburg, president-elect of the Pennsylvania Trial Lawyers Assn., graduate of Temple University Law School; Thomas B. Rutter, Esq., partner in Litvin and Rutter, Philadelphia, member of the American and Pennsylvania Trial Lawyers Assn., member of the Philadelphia, Pennsylvania and American Bar Assns., and graduate of the University of Chicago Law School, and William J. O'Brien, Esq., partner in Pepper, Hamilton and Scheetz, Philadelphia, member of the medical-legal committee of the Philadelphia Bar Assn., lecturer on medical malpractice and graduate of the Villanova University School of Law.

Every effort has been made to run this course at the level of the physician actively engaged in the care of patients. The legal obligation of the hospital, intern staff, resident staff and attending physician is carefully delineated.

All Commonwealth physicians are urged to avail themselves of this vital opportunity to enlighten their knowledge on the important subject of malpractice in the emergency room.

The PMS touring company will be presenting its drama to audiences in Lewistown, May 13, and West Chester, June 10, and in Philadelphia and Pittsburgh later in the year. Details may be obtained by writing to the PMS Council on Education and Science.



Hemolysis Induced By Nitrofurantoin

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Philadelphia

The treatment with nitrofurantoin (Furadantin^{R}) has been associated with hematologic abnormalities such as leukopenia,[1] megaloblastic anemia,[2,3] and hemolytic anemia.[3-8] It has been suggested that an enzymatic deficiency within the erythrocyte is the basic defect responsible for the development of hemolysis associated with nitrofurantoin administration.[4,5,7] This report describes a patient with an acute hemolytic episode that occurred during nitrofurantoin therapy. No apparent quantitative enzymatic deficiency of the patient's enthrocytes was detected. Elliptocytosis was present as an associated defect.

Case Report

An 83-year-old Italian male was admitted to the Philadelphia General Hospital on July 21, 1968 in a semicomatose state. He was a known diabetic,for fourteen years treated with Diabinese^{R}, with a known history of an old cerebrovascular accident. The physical examination revealed a semicomatose, clinically dehydrated elderly white male. The blood pressure was 134/60 mm Hg, pulse rate was 100/min., and rectal temperature was 105^{O} F. Besides the abnormal neurological findings which had resulted from an old CVA, the physical examination was within normal limits.

The hemoglobin was 14.4 g/100 ml, WBC 9,000/mm^{3} with a normal differential count, BUN 55 mg/100 ml. After hydration the hemoglobin concentration was 10.6 g/100 ml; WBC count 9,000 per cu. mm; the reticulocyte count was 1.8%; the red blood cell morphology revealed ovalocytosis; BUN 14 mg/100 ml, and the blood sugar was 108 mg/100 ml. The temperature returned to a normal level, and the patient became responsive.

The hospital course was uneventful until he developed a temperature elevation and an increased blood sugar. A urine culture revealed infection with gram negative baccili sensitive to nitrofurantoin. Therapy with regular insulin and nitrofurantoin (Furadantin^{R}) 100 mg four times a day was instituted. The hemoglobin concentration at this time was 10.6 g/100 ml. Within forty-eight hours the patient became afebrile and the blood sugar returned to a normal level. Four days after nitrofurantoin therapy was instituted, a reduction in the hemoglobin concentration was noted. The hemoglobin concentration continued to decrease, and hemolysis was considered; nitrofurantoin was discontinued on the eighth day of treatment. Laboratory data at this time revealed a hemoglobin of 5.9 g/100 ml; hematocrit was 20%; WBC 6,200/mm^{3}, and the reticulocyte count was 6.2%; Coomb's tests, direct and indirect, were negative; serum B$_{12}$ and folic acid levels were within normal limits. The levels of the following red blood cell enzymes were measured three weeks after nitrofurantoin therapy was discontinued and were all within normal limits: hexokinase, glucose phosphate isomerase, phosphofructokinase, aldolase, glyceraldehydephosphate dehydrogenase, triosephosphate isomerase, phosphoglycerate kinase, phosphoglycerate mutase, enolase, pyruvate kinase, lactic dehydrogenase, glucose-6-phosphate dehydrogenase, phosphogluconate dehydrogenase, glutathione reductase, glutathione peroxidase. The level of red cell reduced glutathione determined at this time was also within normal limits. Hemoglobin electrophoresis revealed hemoglobin A of 96.3%, A_2 of 2.1% and F of 1.6%. The red blood cell survival half life done one week after nitrofurantoin therapy was discontinued was 8.4 days using Cr^{51} (the normal range for this test is 25-35 days). A glutathione stability test performed on one occasion was abnormal - a 41 per cent decrease in reduced glutathione (10 per cent decrease occurs normally). A bone marrow examination revealed normoblastic hyperplasia and elliptocytosis with adequate iron stores. The hemoglobin concentration one month after the acute episode of hemolysis was 10.2 g per 100 ml with a reticulocyte count of 1.2%. The relationship of hemoglobin and reticulocytes during the course of hemolysis is shown in Fig. 1.

Discussion

Administration of nitrofurantoin to some individuals has been reported to produce hemolytic anemia as evidenced by a reduction in circulating red blood cells and hemoglobin concentration, hemoglobinuria, reticulocytosis, and an increase in serum bilirubin.[5,6,8] The mechanism of the hemolysis is not clear. A hemolytic factor has not been detected in the serum of these patients.[4,6,8] DeVeber and Valentine[3] reported hemolytic anemia and concomitant megaloblastic erythropoiesis suggesting that hemolysis precipitated or aggravated an existing folic acid deficiency or there was interference by nitrofurantoin with the absorption of folic acid. Our patient exhibited evidence of rapidly decreasing hemoglobin concentration with a subsequent reticulocytosis, shortened red blood cell survival time and no evidence of autoantibodies, blood loss, or megaloblastic erythropoiesis.

Nitrofurantoin is one of the drugs capable of inducing intravascular hemolysis in primaquine-sensitive individuals.[5,9] Such individuals have been shown to be deficient in the red blood cell enzyme glucose-6-phosphate dehydrogenase (G-6-PD).[10] In our case the G-6-PD level was measured during the acute hemolytic episode and one month post-hemolysis, and was within normal limits.

Buzard[11] and his co-workers have demonstrated that nitrofurantoin has no effect of G-6-PD but inhibits the glutathione reductase activity of the red blood cells of various species in vitro. These data suggested that the administration of nitrofurantoin to a primaquine sensitive person interferes with a function of the system that is intrinsically malfunctioning, and thus triggers hemolysis.[11] In our case all red blood cell enzymes were normal but an abnormal glutathione stability test was reported. One may speculate that the patient had a degree of glutathione instability as an inherited defect, and that the increased instability and hemolysis was triggered by nitrofurantoin. Ethical considerations precluded challenging the patient with a full second course of nitrofurantoin while repeating the glutathione stability test.

The relationship of hereditary elliptocytosis to the acute episode of hemolysis must also be considered. Geerdink[12] et al reported a large number of cases in which elliptocytosis did not influence hemoglobin concentration, hematocrit value, and erythrocyte count, indicating a "compensated hemolysis." It has also been shown that hemolysis in elliptocytosis may be due to other associated biochemical abnormalities within the erythrocyte: hemolytic anemia in elliptocytosis was reported in a case of G-6-PD deficiency and also in a case with a reduced level of erythrocyte glutathione.[13] In our case there was no G-6-PD deficiency, nor any reduction in glutathione. The elliptocytosis was probably responsible for the low grade anemia originally noted in this patient. Nitrofurantoin could have been the stimulus for the acute hemolytic episode. There are several possible explanations for the hemolysis in this case: 1. nitrofurantoin might have impaired the integrity of the erythrocyte via glutathione instability; 2. nitrofurantoin altered the already abnormal membrane structure of elliptocytosis with the glutathione instability serving as a mediator; 3. nitrofurantoin as an oxidant drug acted alone on the stromal defect of elliptocytosis causing hemolysis. The exact mechanism remains undetermined as yet.

Dr. Carpel is associated with the Hahnemann Medical Division, Philadelphia General Hospital, and with Hahnemann Medical College.

Summary

A case of acute intravascular hemolysis associated with nitrofurantoin was presented. There was no detectable quantitative deficiency in the red blood cell enzymes. Elliptocytosis was present as an associated defect.

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REFERENCES

1. Hansen, H. B., and Moore, T. D.: Nitrofurantoin - a study in vitro and in vivo in one hundred cases of urinary infection, J. A. M. A. 155:1470-1473, 1954.
2. Bass, B. H.: Megaloblastic anemia due to nitrofurantoin, Lancet. 1:530-531, 1963.
3. DeVeber, L. L., and Valentine, G. H.: Nitrofurantoin and megaloblastic anemia. Lancet. 2:697-698, 1964.
4. Garrett, J. V., Hallum, F., and Scott, P.: Urinary antiseptics causing hemolytic anemia in pregnancy in a West Indian woman with red cell enzyme deficiency. J. Obstet. Gynaec. Brit. Comm. 70:1073-1075, 1963.
5. Kimbro, E. L., Sachs, M. V., and Torbert, J. V.: Mechanism of hemolytic anemia induced by nitrofurantoin (Furadantin^R). Bull. Johns Hopkins Hosp. 101: 245-257, 1957.
6. Levy, D., Porgess, A.: Haemolytic anemia in a child receiving nitrofurantoin. Arch. Dis. Childh. 33:527-528, 1958.
7. Pritchard, J. A., Scott, D. E., Mason, R. A.: Severe anemia with hemolysis. J. A. M. A. 194:457-459, 1965.
8. West, M., and Zimmerman, H. J.: Hemolytic anemia in a patient receiving nitrofurantoin (Furadantin^R). J. A. M. A. 162:637-639, 1956.
9. Kellermeyer, R. W., Tarlov, A. R., Brewer, G. J., Carson, P. E., and Alving, A. S.: Hemolytic effect of therapeutic drugs. J. A. M. A. 180:388-394, 1962.
10. Carson, P. E., Flanagon, C. L., Ickes, C. E., and Alving, A. S.: Enzymatic deficiency in primaquine-sensitive erythrocytes. Science. 124:484-485, 1956.
11. Buzard, J. A., Kopko, F., Paul, M. F.: Inhibition of glutathione reductase by nitrofurantoin. J. Lab. Clin. Med. 56:884-890, 1960.
12. Geerdink, R. A., Helleman, P. W., and Verloop, M. C.: Hereditary elliptocytosis and hyperhaemolysis. Acta. Med. Scand. 179:715-728, 1966.
13. Ozer, L., and Mills, G. C.: Elliptocytosis with haemolytic anemia. Brit. J. Haemat. 10:468-476, 1964.

Comprehensive Health Planning

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The position of the Pennsylvania Medical Society toward the Comprehensive Health Planning Legislation can best be summarized as one of concern, of cooperation, and of encouraging physician leadership. The question that you are justified in asking is whether this is a platitude or a practical constructive posture.

Consider first our reasons for concern. The Comprehensive Health Planning Legislation assumes that we can identify factors that affect health and that these factors can be modified to improve health and reduce costs through a community planning process. A truly big order for this legislative "knight in shining armor." If expectations exceed the practical limits of achievement, there is cause for concern.

A serious concern is whether the promoters of the legislation have mistakenly led the public to believe that a community board of consumers and providers can, in fact, identify the factors that affect health care, and that their planning will improve health care and reduce costs. At times, there does appear to be a clear-cut relationship among basic research, its medical application, community planning, elimination of disease, and reduction in health care costs. Polio is an example. However, attractive as it may sound, such a process is not equally applicable toward resolution of other problems. For example: The United States ranks high, but at least trails France, in deaths from cirrhosis. It would be fallacious to assume that either better medical care can improve these statistics or that community planning can have a significant impact upon an individual's personal eating and drinking habits. A better chronic renal disease program may well improve health, but will certainly increase costs. In other situations, the relationships affecting health are even less clear. For example, why do middle aged men near Lincoln, Nebraska live longer, or why is a parathyroid disease detected earlier in the United States than in Europe?

The intelligent study of factors influencing health is not a simple process that can be grasped quickly by even trained health professionals, but rather is a research project in its own right. The National Bureau of Economic Research reports that education has a marked effect upon health, but, when the effect of education is excluded, increasing income adversely affects health. Other of their studies report young black children have a mortality double whites, but, among the elderly, the black mortality rates are less. They suggest that 10 per cent more medical care improves health 1 per cent. It is quite clear that the methodology and effectiveness of health planning are not precise, and may be less of a factor than other measures, planned or unplanned, which will improve education, nutrition, housing, or personal motivation toward achieving better health.

Can we even agree upon what "good" health planning is? It obviously means different things to different people. To physicians engaged in patient care it means developing therapeutic modalities to restore their patients to health. Public health physicians will measure better health planning by its community effect as reflected in morbidity or mortality rates. Hospital administrators and educators would have a somewhat different view and some would consider better health planning in terms of reduced health insurance premium costs or how well the costs are hidden.

"Consumers," or patients, will tend to relate health planning to personal experience with disease and how satisfactorily they feel their needs have been met or ignored by physicians and hospitals. They can be expected to have little concern for problems they feel they will not have to cope with, or diseases they are unlikely to get, as witness recent complaints that the Department of Health, Education, and Welfare was worrying too much about pollution problems rather than about the care of the sick. Nevertheless, the fact that so many viewpoints exist is evidence that a broad-based board is needed for success.

Recognition of the limitations of health planning certainly does not deny that there are areas where better community planning could result in more effective use of health resources. Can a practical process of community planning that will focus on the possible really be achieved? What are the road blocks? Will the Department of Health, Education, and Welfare, with its self-appointed consultants from civilian life, estimate its own knowledge to be so superior that it will restrict a community's freedom to experiment in determining its medical future within federal regulations? Must a community precommit the board it selects to a work program so rigidly specified by detailed but constantly changing federal guidelines and informal letters that the board's primary purpose changes from planning better health, to grantsmanship and creating an illusion of community planning while rubber stamping federal suggestions?

If Papa Sam believes he knows best, can he resist the opportunities to make community decisions himself, and assist communities in making their own decisions? Or is there a "generation gap" of bureaucracy that makes him too slow or too myopic to respond quickly to community initiative?

Assuming instead a benevolent constructive attitude on the part of government can there be an effective planning effort of the diverse groups needed for success? A major concern expressed by the providers is that the specified consumer majority will reject professional advice in such a way that health care will become regimented and less efficient. The American Medical Association believes this is a weakness which it seeks to change. There is precedent for such a view. Physicians are poorly represented on many health agencies and boards at the very time their function has become more complex.

On the other hand, the concern expressed by representatives of both urban and rural poor is that the health care system has left them out and that an alliance of the establishment, represented both by consumers and providers including physicians in private practice, will keep them out. As chairman of a nominating committee for the Western Pennsylvania Agency, I was personally involved in finding both the black and the poor to provide a proper balance for the board. It is quite evident these concerns by consumers are as justified as the concerns we see more clearly. There is similar concern of lip service only to black involvement and improving the lot of the rural poor whom we do not see. As physicians, we must try to understand these concerns.

It has been stated that consumers cannot plan or design production of Fords, so why should they be expected to be knowledgeable in the planning and delivery of complex health services? But the public can ignore an Edsel or even take a bus. The Ford Motor Company must do market research if it is to avoid future Edsels and continue to sell Mavericks. The Comprehensive Health Planning Agency can offer us a unique opportunity to do better market research to determine true public demands, and at the same time, sophisticate the public's perception of its health care needs and encourage people to budget for these needs. Many of our problems arise because we forget that needs which are perceived, no matter how valid, do not constitute a demand for service unless there is recognition of both a necessity and willingness to pay for or donate that service. Personally, I feel that if we as health care providers cannot obtain the public's confidence that we are exerting leadership in meeting their demands and receive their approval of the health plans we are capable of developing with our particular expertise and their advice, then, we are indeed headed for serious trouble. And just quite possibly we are headed for trouble.

Well, why should the Pennsylvania Medical Society cooperate in such a venture or urge physicians not only to participate, but to exert leadership in such planning efforts? Quite frankly, the explosion in health care knowledge has created complex problems in applying this knowledge to improve the nation's health. Paradoxically, the concerns and uncertainties rather than the glowing promises of success are reason why we must participate. New, more sophisticated, and coordinated approaches to health planning are required. There is no better way than by a cooperative effort between providers and consumers of health care, working together at the local level. This is the essence of the voluntary planning approach endorsed by the American Medical Association and the Pennsylvania Medical Society. As I read the legislation and talked to Dr. James Cavanaugh several years ago, I felt such a voluntary approach was intended. At least these guidelines are more logical and understandable than other federal guidelines I have had the laborious obligation to read. Physician's skills to help plan, analyze, and evaluate a program's effectiveness are required.

By participating, we can assist in fulfilling one of the purposes for which our society was formed – to improve the health of our people.

Cooperation with the government has been distasteful to many physicians, and quite probably, to many in government, cooperation with physicians is abhorrent and seems "contrary to public interest." From a pragmatic point of view, we, as physicians, must recognize that the public will probably continue to demand a greater voice in planning its health care needs, and that the federal government has the bank roll to finance these efforts and provide the basic staff to get the communities off to a start. An important function will be for them to assure the public that regional agencies are operating within the intent of the law. From an equally pragmatic point of view, government must recognize us as having the capability to develop physician leadership.

Dr. Marshall is chairman of the Council on Medical Service of the Pennsylvania Medical Society and is a member of the board of the Western Pennsylvania Regional Medical Program.

I believe cooperation between government and organized medicine is possible. The press of time and the explosion of health care have put us together in this comprehensive health planning boat, like it or not. One of our nominees, Dr. James Appel, past president of the American Medical Association, serves on the state's Advisory Council. Both our commission on comprehensive planning, chaired by Dr. George Moffit and staffed by Mr. Larry Fosselman, have cooperated with the state agency in a consultative capacity both formally and informally and as the agency becomes more fully operative, we would hope to take advantage of new opportunities for cooperation. The difficult nature of some of the problems we face in Comprehensive Health Planning is demonstrated by the magnitude of the problems faced in efforts to develop better ways to meet the health care needs of the poor for which the public perceives a need but is unwilling to pay.

With respect to Western Pennsylvania where I have been involved, the new twist of developing an application for an operational grant, without a preliminary planning grant has been given a broad base of support by our physicians, including those who belong to the Gateway Medical Group, a division of the National Medical Society. Staff time has been donated by both the Allegheny County and Pennsylvania Medical Societies. Funds have been contributed by the Allegheny County Medical Society Foundation. Granted, progress has been slow, frustrating at times. Skipping a grant to plan how to plan was an effort to speed that progress. During the same time, a Council on Emergency Service, sponsored by the Allegheny County Medical Society and now a community-based project, has been formed and has been operational for more than a year. A ghetto ambulance service has progressed from dream to reality. The Regional Medical Program has become fully operational, has had its first grants approved, and has been able to exert leadership in assisting the development of the Comprehensive Health Planning application. This grant application has been nearly three years in the making and is still awaiting federal action since its submission seven months ago. The application was endorsed by all twelve county medical societies. Even reading it is no small job. Its current board and advisory councils include a broad base of both black and white physicians in private practice and specializing in the fields of mental and environmental health, preventive medicine, education, and administration. Dental and osteopathic representation is included. I am a member of this board. I believe it can be a significant force to improve the health of the community and I will do my best to make it so.

In summary, I believe our concerns are genuine. We recognize the need to develop better health planning. To this end, I can pledge the cooperation of the Pennsylvania Medical Society and the leadership of our physicians toward the accomplishment of this objective, as long as the *voluntary intent*, if the legislation is preserved, physicians are represented on the policy making boards, and the appropriate role of the Pennsylvania Medical Society is recognized.

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PENNSYLVANIA MEDICINE special report

An Updated Look at Professional Corporations

LEIF C. BECK
Pepper, Hamilton and Scheetz, Attorneys
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Every physician has by now been exposed to speeches and articles, often accompanied by dramatic examples of potential tax savings, extolling the professional corporation. This article is not intended to review those tax benefits, for most experts agree that if the physician's income exceeds $40,000 per year the dollar advantages will probably exist and are generally well understood. Instead, I would like to go into the "second generation" of thought about professional corporations – those matters which are vital to a sensible decision whether to incorporate after the dollar tax advantages have been digested.

The Current Tax Position

Beginning last August the physician was undoubtedly deluged by the information that the Internal Revenue Service had finally conceded. A professional association or corporation* properly formed under state law would, said the IRS, "generally" be accorded such status for income tax purposes as well. Many sales people hoped this pronouncement would cause Pennsylvania's physicians to tumble in droves into the professional corporation form, as has previously occurred in many other states. That rush did not, however, occur to the extent expected. A couple of minor distractions may have been responsible for Pennsylvania's comparative reluctance, for these distractions have received an inordinate amount of negative attention. The professional corporation's current tax status actually remains very favorable, a fact which becomes apparent once these problems are clearly identified and understood.

The first distraction occurred last October, when the Senate Finance Committee proposed to insert into the Tax Reform Act of 1969 a provision limiting the tax benefits of professional corporation retirement plans essentially to the benefits available under self-employed retirement plans (commonly known as H. R. 10 Plans or Keough Plans). Since increased pension and profit sharing plan participation is by far a professional corporation's major tax advantage, the proposal threw a great pallor over physicians' enthusiasm for incorporating. Physicians were simply not interested in the corporate form so long as the retirement plan might be restricted. Finally, on December 9, the full Senate rejected the restrictive proposal by a rather decisive vote, 65-25, and thus the tax law continues to contain no special restrictions affecting professional corporations. It is, however, surprising that many physicians, as well as attorneys and accountants, have continued to believe that the Tax Reform Act "killed" the professional corporation. This is simply not true.

The second distraction occurred last December 3, when a court of law finally decided a tax case *against* a professional corporation. In this much discussed U. S. Tax Court decision, *Jerome J. Roubik,* a group of four radiologists in the suburbs of Madison, Wisconsin were denied the desired corporate tax treatment essentially because they did not conform their medical practices to the new corporate form. The Tax Court decision acknowledged that the corporation involved was a valid one, but it concluded that the physicians had not integrated their "business" activities *into* that corporation. Rather, held the Court, the physicians continued to personally conduct their own separate practices, so that the corporation was no more than a "set of bookkeeping sheets."

Responsible tax advisors consider the *Roubik* decision a breath of fresh air. It supports what has been preached all along—one who seeks the tax benefits of a corporation must accept, respect and actually follow the corporate form. The decision illustrates the importance of obtaining responsible advice, of planning carefully and of conscientiously adhering to the advice and blueprints set out for him. If the physician exercises this degree of responsibility, not really a difficult requirement, then the *Roubik* decision actually strengthens his claim to the desired tax advantages.

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*Under current Pennsylvania law, professionals may not practice in "corporations" but may operate only in the form of "associations." For convenience, however, this article will generally refer to professional "corporations" except where specific reference to professional "associations" is necessary.

For Pennsylvanians, a third apparent problem appeared recently. As with the first two, however, if the Pennsylvania state legislature will take its anticipated action this problem should not adversely affect a physician's decision to incorporate. The recent difficulty was the IRS' failure, in Rev. Rul. 70-101, to list either of Pennsylvania's professional association acts among the various state professional service corporation laws which it would accept as creating valid corporations for tax purposes. Although most state professional service corporation laws were approved, one of Pennsylvania's two statutes was ignored completely while the other was one of three statutes included on the "maybe" list appearing at the end of the Ruling.

Pennsylvania physicians have a choice of incorporating under either of two statutes. The old Professional Partnership Association Act of 1874 has probably been used by most medical groups, for it offers the traditional form of corporate limited liability which can be important in a group practice. The 1874 Act has also been the specific subject of a State Attorney General's Opinion that medical associations organized and operating thereunder would not violate state restrictions on medical practice. Although the characteristics discussed in that Opinion satisfactorily cover the traditional characteristics of a corporation, making the 1874 Act perhaps the more "corporate" of the two Pennsylvania statutes, Revenue Ruling 70-101 completely ignored this Act. This is puzzling, in view of tax practitioners' knowledge that the Philadelphia District of the IRS has approved retirement plans adopted by 1874 Act professional associations.

Since the 1874 Act requires three or more associates, the sole practitioner and the two-man partnership seeking corporate tax benefits have had to resort to the newer Professional Association Act of 1961. Revenue Ruling 70-101, however, stated that associations organized under the 1961 Act "may or may not" qualify depending on the given case. This is tantamount to original IRS disapproval, perhaps because the 1961 Act lacks the very important corporate characteristic of limited liability.

Since the 1961 Act presently lacks specific tax approval, some advisors lean towards telling the solo or two-man practitioner to forego incorporating for the time being. In my opinion, basing such advice on the 1961 Act's tax status would be sadly lacking in perspective. Similarly, it would be unfortunate to use the IRS' silence as to the 1874 Act as a reason not to incorporate. The reason is Pennsylvania's proposed Professional *Corporation* Law, under which professional *associations* created under either of the old Acts can routinely be converted into professional corporations having all the attributes of corporations approved by the Service in many other states. The proposed Act and its very high likelihood for adoption are discussed in this article. In view of this possibility of conversion in the near future, it is unlikely that the IRS will successfully challenge the validity of a Pennsylvania association which by that time will be a well accepted professional *corporation*. The fact of prompt conversion should itself be strong evidence against any IRS claim that the interim association lacked true corporate meaning.

The Tax Outlook for the Future

Although current tax law favors the professional corporation, the conscientious advisor must also be aware of what the tax law may become. In their eagerness to incorporate a busy physician, many salesmen with vested interests in incorporation may appear convinced that today's tax law will exist forever. Some of the primary reasons for incorporating will not, however, actually benefit the physician for many years (often not until his retirement or earlier death), and thus the future tax treatment of a professional corporation should be as significant as is the current law. The advisor who anticipates a continuing and growing clientele recognizes this—he does not want his client(s) to ask "why didn't you tell me these changes might occur?"

The concensus view is that within a few years the professional corporation may be less advantageous than it is today. This does *not* make immediate incorporation inadvisable; it simply means that the comparative tax advantages of the corporation may become something less than are generally described, although nevertheless favorable. My personal view is a very strong "yes" to incorporating appropriate groups of physicians, but *only* after they realize and accept the possibilities of tax law changes. These possibilities are described below.

In conceding defeat last August, the IRS did not give up its effort to limit the incentives to incorporate. The Treasury Department has in fact stated its concern in terms that most tax practitioners have stated for years: a physician (or any other self-employed person) should be entitled to the same tax benefits and burdens as any corporate employee without having to shift his practice (or other business) into the corporate form. This proposition is the subject of a rather extensive Treasury Department study, the recommendations of which will hopefully be made public soon. Treasury officials have indicated, however, that they will recommend changes designed to equalize the tax treatment of corporate and self-employed retirement plans, with strong hints of limiting to $10,000.00 the annual tax deduction for plan contributions for *any* person, whether he is employed by a corporation or by himself. Such a change would be a tremendous improvement in self-employed retirement plans (Keough plans), which are currently limited to annual contributions of $2,500 per person. On the other hand, it would considerably reduce the potential retirement fund for the highly paid corporate employee, whether he is president of General Motors or the sole owner and employee-physician of his own professional service corporation.

Although most of the attention has been on the supposed $10,000 limit, the Treasury study is expected to be considerably broader, covering other differences between Keough plans and corporate plans as well as the many other aspects of corporate fringe benefits. How extensively the Treasury's recommendations will cover all the advantages of incorporating is conjectural at best, but one can hardly imagine proposals putting the self-employed person on a completely equal tax footing with the corporate employee. Therefore, even if all recommendations of the Treasury study should become the law, exactly as proposed, the professional corporation will undoubtedly continue to offer tax advantages not available to the self-employed physician.

Even more open to conjecture is whether the Treasury recommendations, whatever they may be, will actually be enacted into law by Congress. We saw last year, in at least four parts of the Tax Reform Act, that employee benefits raised political questions over which Congressmen and Senators tended to have sharply divergent opinions. Since the recommendations of the present Treasury study will affect so many powerful forces (corporate executives, the insurance industry, banks and trust companies, perhaps even labor unions) in addition to the professionals, any predictions as to what will become the law would border on being foolhardy. Under these circumstances, my personal attitude for the time being will be to disregard the Treasury Department's study in the decision whether to incorporate. I would recommend disregarding it, however, *only* after the physician understands and accepts the possibility of change.

In a similar vein, a movement to modify the Federal estate tax (the death tax) has been developing for several years, and under one fairly well-supported proposal the current exemption of death benefits paid under corporate retirement plans would be removed. Since exemption from death taxes is one of the major advantages of a corporate retirement plan over a Keough plan, loss of this exemption would significantly reduce the projected advantage of incorporating. Once again, however, whether such a proposal will ever pass Congress is purely conjectural. Thus I suggest disregarding this *possibility* of change as a current factor in deciding whether to incorporate, although one would be dishonest in unqualifiedly assuring a physician of estate tax exemption for his corporate fund.

Even if the various proposed tax changes should be adopted, *when* they will become law is still another matter of conjecture. The Treasury Department study, for example, had been proceeding at high priority speed but it has developed snags delaying its publication from the previously anticipated late March date to some unspecified future date. In view of just these apparent *internal* snags, the recommendations have virtually no chance of speeding through Congress. In my opinion the proposals will not even be considered by Congress in 1970; they will be controversial enough to require considerable Congressional time and attention, but they will not be of such overriding national import as to receive priority in scheduling. Perhaps the recommendations will languish even through 1971 before adoption (or rejection) in whatever their final form.

Based on the above, a physician who incorporates now will at least be entitled to all the desired tax benefits for 1970 and perhaps for 1971 before any proposed changes become law, if they become law at all. Retroactive application of these changes would be highly unlikely. Since each year's contribution to a corporate retirement plan and each year's income tax saving thereon is a separate and valuable result, a physician's delay in incorporating is tantamount to his surrendering *forever* the year's tax savings. The reduction in a successful physician's income tax caused by only one year's corporate status should far exceed the costs and fees involved in his incorporating. Therefore, nothing will be lost and something will undoubtedly be gained even in the extremely unlikely event that *all* tax advantages of the professional corporation are removed next year.

In conclusion, the physician should be aware of the potential limits upon the professional corporation. Both as a service to the physician and to protect himself, a conscientious advisor should be sure his physician-client understands the uncertainty. Nevertheless, assuming the situation is otherwise appropriate, I believe that to delay advising or deciding to incorporate because of concern over future tax law would be a terribly expensive display of over-conservatism bordering on cowardice.

The Proposed Pennsylvania Professional Corporation Law

As previously described, the IRS' unwillingness to include Pennsylvania among the list of "approved" professional corporation states should not adversely affect a physician's decision to incorporate. Much of my confidence in this regard is due to the likelihood that our state legislature will soon enact the "Professional Corporation Law," presently pending under the designation "S. B. 1005." This bill has been patterned after effective professional corporation statutes existing (and tax approved) in other states, and it will undoubtedly become entitled to the same IRS approval upon its adoption. Without the imminent passage of S. B. 1005, incorporation of a one or two man practice under the present 1961 Act would be extremely dangerous while even larger groups organizing under the 1874 Act might have greater doubts.

S. B. 1005 unanimously passed the State Senate on October 15, 1969 and was thereupon referred to the House Committee on Professional Licensure. It has since languished in that Committee despite the apparent complete lack of any opposition to its passage. Much of this delay has been due to the extremely hectic nature of the 1969-1970 legislative activity (witness the recent tax and budget fiascos), and it is hoped that the Bill can now find its way out of Committee. The Bill is of sufficient importance to physicians and other professionals, however, that a letter-writing campaign to the Chairman and members of the Committee would be most helpful.*

Although the details of the proposed Professional Corporation Law (S. B. 1005) are of more interest to attorneys, a broad description should be helpful to physicians as well. Basically, the proposed law would treat a professional corporation like any business corporation unless inconsistent with the rendition of professional services. Thus the professional corporation will be organized essentially like other corporations with shares of stock, boards of directors, continuing life beyond a shareholder's death, transferability of the shares of stock, and the like. It will also have the usual corporate attribute by which a physician's personal assets will be immune from debts and claims against the corporation (including those arising from malpractice), except to the extent a debtor claim arises from that shareholder's own personal activity. As with any other corporation, there may be any number of shareholders so that a one-man corporation will be possible. The proposed law would even facilitate the small corporation by requiring only a one-man board of directors for a corporation consisting of three or fewer shareholders.

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*The Chairman of the Professional Licensure Committee is Austin J. Murphy, 308 Fallowfield Avenue, Charleroi, Pennsylvania 15022.

After providing for the general application of business corporation principles, S. B. 1005 imposes those restrictions obviously necessary to assure that the professions' legal and ethical standards are not compromised by the corporate activity. The proposed law would require, for example, that only persons licensed to practice the particular profession may own stock in the corporation. Thus a physician-shareholder may sell his shares in his professional corporation only to another licensed physician (or back to the corporation), and upon either his death or his loss of license to practice his shares *must* be sold to another physician or back to the corporation. The penalty for a corporation's permitting an unlicensed person to hold shares, beyond a stated period following death or disqualification, is the corporation's dissolution and loss of its charter. Surprisingly, nothing in the proposed law requires a professional corporation's board of directors to consist solely of licensed persons, even though many basic business decisions should normally be made by the board. Thus is appears that a medical group's attorney, accountant or other advisor may sit on its board of directors.

S. B. 1005 further provides that only duly licensed professional persons may render the corporation's professional services, although non-professionals may be corporate employees. To prevent confusion, the proposed law specifically states its intention not to preclude the use of nurses, secretaries, technicians and other non-professional assistants from performing their usual duties under the supervision and control of professionals. Thus the traditional conduct of a medical practice should not be disturbed by adoption of a professional corporation.

The corporate attribute usually of most interest, and probably most often misunderstood, is that of limited liability. The proposed law contains the standard limitation on a shareholder's liability for a corporation's debts, preventing a creditor (perhaps the plaintiff in a malpractice suit) from going behind the corporation to the shareholder's own personal assets. This feature is clearly restricted, however, so that it does not interfere with the essential professional relationship and liability of the treating physician to his patient, including his liability for errors of non-professionals (nurses, technicians, etc.) under his *direct* supervision and control. The net effect of the limited liability feature is, therefore, to insulate a physician's personal estate from liability for errors of other physician-members of his corporation, although not from his own professional responsibilities. This feature does not exist with respect to partnerships nor to 1961 Act professional associations, and in view of the increasing cost and limits of malpractice insurance it is becoming an increasingly significant advantage of the professional corporation.

The advantages of incorporating under the proposed Professional Corporation Law are not limited to groups incorporated after its adoption. Under S. B. 1005, an existing 1974 Act association will *automatically* become converted into a professional corporation covered by the new law. An existing 1961 Act association may become transformed into the true corporate form by filing a simple election certificate, and if it takes no action by 1975 it will also automatically become a professional corporation. Because of these extremely convenient conversion features, I submit that there is no sense in a group's delaying incorporation to await the advent of the professional "corporation."

The One-Man Corporation

There has been a rather wide-spread notion that the professional corporation device is useful only to groups of physicians, that it is not available to the sole practitioner. The tax advisor has been particularly concerned about the solo physician's incorporating because the various possible avenues of IRS attack against any professional corporation, becoming less fearsome to the multiple-physician corporation, would be most forceful in the one-man situation. Despite this skepticism, one-man professional corporations abound in several states, including California, Michigan, Illinois and Florida, and favorable IRS retirement plan determinations have been issued in at least some solo situations. Tax advisors' opinions are consequently becoming less categorical, while the insurance men are more aggressively pursuing the solo practitioner. The following paragraphs are intended to supply some perspective for the solo physician in view of these developments.

On the negative side, almost every argument for denying corporate tax treatment applies in spades to the one-man corporation. For instance, it is far more difficult to establish non-tax, business reasons for incorporating a sole practitioner: he cannot centralize his management any further; he presumably is not interested in divided ownership by shares of stock and their transfer, and he has no need to insulate against liability for "partner" physicians' malpractice. An incorporation without good business reasons (other than tax savings) is particularly vulnerable to IRS attack. Furthermore, it is obviously more difficult to establish that the sole shareholder-physician's "salary" from his corporation is "reasonable" since he is free to set it at whatever amount he wishes. An IRS determination that some of a salary is unreasonable compensation for services as an employee will result in an unfavorable duplication of income taxes.

Some of the negative factors are now becoming less fearsome. The Service has indicated that a one-man professional corporation is not automatically invalid, for its recent Revenue Ruling 70-101 called for acceptance of corporations under various statutes many of which permit as few as one shareholder. Arguments that there may exist valid-non-tax, business reasons for a solo's incorporating are coming to light, the most prevalent being the physician's desire to limit his liability for errors made by his non-professional staff (assuming proper supervision) and by physicians employed by or substituting for him. As to the tax objections to one man's selection of the corporate form, advocates are quick to point out that non-professional one-man corporations have abounded for decades without being subject to special IRS attacks. Many of them may be low-income repairmen and corner grocers, but there are also many high income manufacturers' representatives, business consultants and the like who have incorporated themselves. Furthermore, it is argued non-professionals often choose the corporate form simply for tax reasons without concern over IRS challenge, and professionals should be entitled to make the same choice.

Pennsylvania's sole practitioners have so far been discouraged from incorporating because the 1961 Professional Association act would offer them little support in establishing corporate tax status. In fact, the word "association" itself implies plural composition thus making a one-man association particularly questionable. The anticipated passage of S. B. 1005 should, however, dispel these doubts and put Pennsylvania's one-man corporation opportunities on an equal footing with those in states where many solos have taken the step.

Under these circumstances, I believe that many a solo practitioner will be justified in incorporating. He should first recognize, however, that the risk of losing the desired tax benefits will be somewhat greater than the risks faced by the group practices, but a probably similar degree of risk existed for *any* professional corporation until the IRS began losing court battles only a few years ago. As a result, the solo professional should incorporate only if he has a considerable amount to gain by it (the marginal case should certainly avoid incorporating) and only if he personally appreciates the balancing of rewards against risks.

Most importantly, since the IRS will presumably be more critical of the one-man corporation, the solo practitioner has the most to gain from conscientious legal and accounting advice based on professional corporation experience. Legal documents may be more thoroughly scrutinized, the solo's salary and retirement plan structure may get closer scrutiny, and his method of business operations will likely be closely reviewed for "corporateness." What a solo physician may save on fees by hiring advisors without particular professional corporation experience may well come back to haunt him upon IRS review.

Practical Advice on Whether to Incorporate

From all the foregoing, it is probably obvious that I am enthusiastic about the professional corporation. It offers potential economic benefits that are not otherwise available to the physician, and although areas of doubt will probably continue for years a hard comparison of the risks and rewards will often (but certainly not in all cases) fall in favor of incorporation.

The physician's decision whether to incorporate must, however, involve certain non-tax, often rather personal questions about himself. There are three particularly important questions:

(1) Can the physician afford the potential tax savings? The corporate retirement plan offers a tax favored vehicle by which he can set aside larger sums *each year* until retirement, but the process will remove those funds from his use. Is the physician, and often more importantly his wife, willing and able to continue his desired life style without those funds? Only the physician himself can supply the answer, but a failure to consider it could make his professional corporation an economic straightjacket.

(2) Is the physician willing to integrate his own medical practice into that of a corporation? Is he willing to accept the status of "employee," even if little more than a change in form, after years of pride in his professional independence? Wholly contrary to the necessary corporate form, many medical partnerships permit each partner great freedom in conducting his practice as he sees fit, often including such matters as setting his own hours and his own fees as he desires. In fact, many medical partnerships are little more than loose combinations of several individual physicians' separately conducted practices. The *Roubik* decision established that a professional *corporation* that fails to integrate the physicians' practices into a *single* practice will not succeed. The physician must therefore face up to the personal question of how such a truly integrated group practice will fit into his philosophy and habits.

(3) Somewhat related to the second question, is the physician willing to live by the rules of the corporation game? Will he make the required changes in bank accounts, letterheads, etc.? Will he accept the periodic need for shareholders' and board of directors' meetings? Will he tolerate his attorney's and accountant's insistence on following certain forms that may to the physician seem of no real importance? These changes of form may be somewhat annoying to the physician for perhaps the first six months, but they rarely interfere with the physician's practice of medicine. The physician's philosophy should be that such changes of form and their attendant annoyances are the price he must pay for his corporate benefits, but he should be personally prepared for them before deciding to incorporate.

The physician should also be careful in choosing his advisors. Particularly, he should be aware that perhaps the great majority of those promoting incorporation have a vested interest in convincing him to proceed. This is most obviously true of the life insurance salesman, but it will similarly apply to the mutual fund representatives, stock brokers, etc. The commissions to be earned each year upon investment of a corporation's retirement fund, whether in insurance, in securities or in a combination, may be very substantial, a fact which may help to explain the salesman's enthusiasm for incorporation. It is far better that the physician pay a reasonable fee to his attorney, his accountant or to a special management consultant for impartial assistance in *considering* incorporation. The fees charged for such assistance will not be significant in relation to the importance of making the correct decision – a principle which the physician himself probably espouses every day under the name of "preventive medicine."

Conclusion

The professional corporation appears to be here to stay, but each physician's decision will have to be his own. I doubt, for example, that any of us will ever see the day in which every medical practice is in corporate form. Because the decision is not a black-or-white matter, therefore, it should be approached much more seriously than often occurs. A mistaken choice could be costly, both in dollars and in patience, and a failure to play the corporate game by its tax imposed rules can cause bitter disappointment. There is so much that can be gained from a professional corporation in the proper circumstances that the physician should give his decision the same degree of care which he is expected to give in treating a patient.

PENNSYLVANIA
MEDICINE

cardiovascular briefs

Treatment of Essential Hypertension

William G. Leaman, Jr., M.D. questions Alfred M. Sellers, M.D., Associate Professor of Medicine, Hospital of the University of Pennsylvania and University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

Should all patients with hypertension be treated?

Since even mild, so-called benign, essential hypertension results in a mortality rate well above normal, some form of treatment is indicated in most, if not all, hypertensive patients. However, no patient should embark on a program of long-term medical treatment without first ruling out specific etiologic factors such as coarctation of the aorta, renal artery stenosis, pheochromocytoma, Cushing's disease, primary aldosteronism, and unilateral pyelonephritis which may be surgically curable. Rarely is there urgency to prescribe anti-hypertensive therapy after only the first office visit. The interval between the first and second office visit provides the opportunity to obtain laboratory studies useful in evaluating the degree of vascular damage to the target organs of hypertension, the heart, brain, eyes and kidney, as well as to screen out surgically curable causes of hypertension. The blood pressure measured on the second office visit may be more representative of the severity of the hypertensive process when anxiety associated with the first examination has lessened.

What evidence is there that anti-hypertensive treatment benefits these patients?

The best evidence is in the conversion of malignant, accelerated hypertension with a poor prognosis for life to a benign, slowed course of hypertension with greatly prolonged survival. On the other hand, there are few long-term studies evaluating the results of treatment of mild hypertension in asymptomatic patients with no evidence of target organ vascular disease. However, there is a distinct clinical impression that early treatment is probably also useful here.

Will anti-hypertensive treatment protect patients from the major complications of hypertension, such as stroke, myocardial infarction, congestive heart failure, and uremia?

As a result of the availability of newer, more effective anti-hypertensive agents, over the past decade there has been a 46 per cent decrease in mortality from complications of hypertension. The incidence of cerebral hemorrhage and uremia has been greatly reduced, and the occurrence of the accelerated phase of hypertension has become less common. Congestive heart failure secondary to hypertension has become a rare cause of death. Cerebral thrombosis and myocardial infarction which involve atherosclerosis, as well as hypertension, continue to be major causes of death, perhaps because anti-hypertensive treatment was begun long after the onset of vascular disease in these target organs. There is some indication, however, that these atherosclerotic events may occur at a slower rate following anti-hypertensive treatment so that even here therapy seems beneficial.

Is there any place for sedatives and tranquilizers in the treatment of hypertension?

Though useful in the mild, labile hypertensive patient whose blood pressure peaks can be directly related to emotional stresses, these agents have been of relatively little value in the long-term management of hypertensive patients.

Which drugs are most commonly used in the treatment of hypertension today?

Most hypertensive patients can be managed successfully with rauwolfia and its alkaloids, reserpine, rescinnamine (Moderil), and deserpidine (Harmonyl), alpha methyldopa (Aldomet), guanethidine (Ismelin), and oral diuretics used alone or in various combinations. For those with mild hypertension (diastolic blood pressure 100 mm. Hg. or less), rauwolfia alone or with an oral diuretic may be quite adequate. For moderately severe hypertension (diastolic blood pressure less than 120 mm. Hg.), alpha methyldopa plus an oral diuretic is usually effective. Guanethidine is reserved for those with severe hypertension (diastolic blood pressure greater than 120 mm. Hg.). For maximum anti-hypertensive potency, a regimen of guanethidine, 50 mg. b.d., alpha methyldopa, 500 mg. q.i.d., and chlorthalidone, 100 mg. q.i.d. is recommended.

Are there any risks to the patient involved in the use of these drugs?

Intelligent and effective use of these anti-hypertensive agents, as with any medical therapy, requires the knowledge of their mechanism of action, their potential side effects, either chemical or pharmacologic, their relative potency, contraindications and dosage. Most patients can be treated without awareness of being "drugged" so that their ability to work effectively is not impaired. All treatment, however, should be individualized and tailored to fit the patient according to the severity of his hypertension and the degree of associated vascular disease. A rule of thumb is that the more potent the agent, the greater the potential for side effects. Guanethidine is the most potent; oral diuretics and rauwolfia the least, with alpha methyldopa moderately strong.

William G. Leaman, Jr., M.D., edited this Brief for the Council on Education and Science, in cooperation with the Pennsylvania Heart Association.

PENNSYLVANIA
MEDICINE
cancer forum

Safeguard Against Skin Cancer

Sun worshippers *should not be against bikinis - perish forbid - but should be aware that too much sun over too many years can be dangerous. The sun bather from another age offers "an ounce of protection" in the form of a sun umbrella.*

Incidence and Prevention

The approach of summer and the re-emergence of the sun worshippers focuses our attention on the most common and most preventable neoplasm – skin cancer. It is estimated that this year (1970) 112,000 new cases will be diagnosed and 5,000 deaths will be attributed to this disease. Solar exposure is high on the list of exciting agents. Understandably farmers, lifeguards, sailors, golf enthusiasts are common victims. Incidence is higher in the Southwestern United States, in light complexioned people; especially those who burn easily rather than tan.

Other Causative Agents

In addition to solar rays, heavy exposure to X-rays can cause skin cancer. Prolonged use of arsenicals and exposure to coal tars and shale oils are other causes.

The Precancerous Lesion

Most of the skin cancers start as a dry scaly patch, plaque or nodule that does not respond to home remedies. When seen by the physician they usually present a keratosis. Since at least 25% of these keratoses would become malignant, all should be considered precancerous and treated vigorously. The distinction between the precancerous keratosis and senile keratosis is not a sharp one. The latter are usually found on the unexposed parts of the skin. The safest approach is to consider all keratoses as potentially malignant.

Prevention

Patients should be warned against unnecessary exposure to the sun's rays. Mechanical screens such as clothing, parasols, big hats and nose shields should be fully utilized. Chemical screens available in the form of creams and lotions are also useful. In industry measures to reduce contact with carcinogens should be instituted and continuously monitored.

Diagnosis

The biopsy remains the definitive method of diagnosis. If skilled specialists are available, referral is simple. The important thing is that the biopsy be adequate, include the margin of the lesion with some uninvolved skin and that the specimen be treated with tender loving care on its journey to the pathologist.

Treatment

The mainstays of treatment have been irradiation and surgery. In deciding which modality to use the eventual cosmetic result is given great consideration. Lesions of the eyelids, nose, ears and lips are usually irradiated while surgery is used for lesions of the scalp, neck, cheeks and below. As in other cancer treatment, the team approach to decisions is most desirable.

Recently there have been encouraging reports of local chemotherapy of premalignant and superficial malignant skin lesions utilizing 5-Fluorouracil. Resolution of neoplasms for up to six years has been observed.

Melanoma, also a skin cancer, is so different from the above it will be discussed in another Cancer Forum.

CANCER FORUM – presented cooperatively by the PMS Council on Education and Science, The Pennsylvania and Philadelphia Divisions of the American Cancer Society, and the Cancer Control Section, Pennsylvania Department of Health. The Cancer Forum is edited by Roland A. Loeb, M.D., Lancaster.

Painful night leg cramps...

unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

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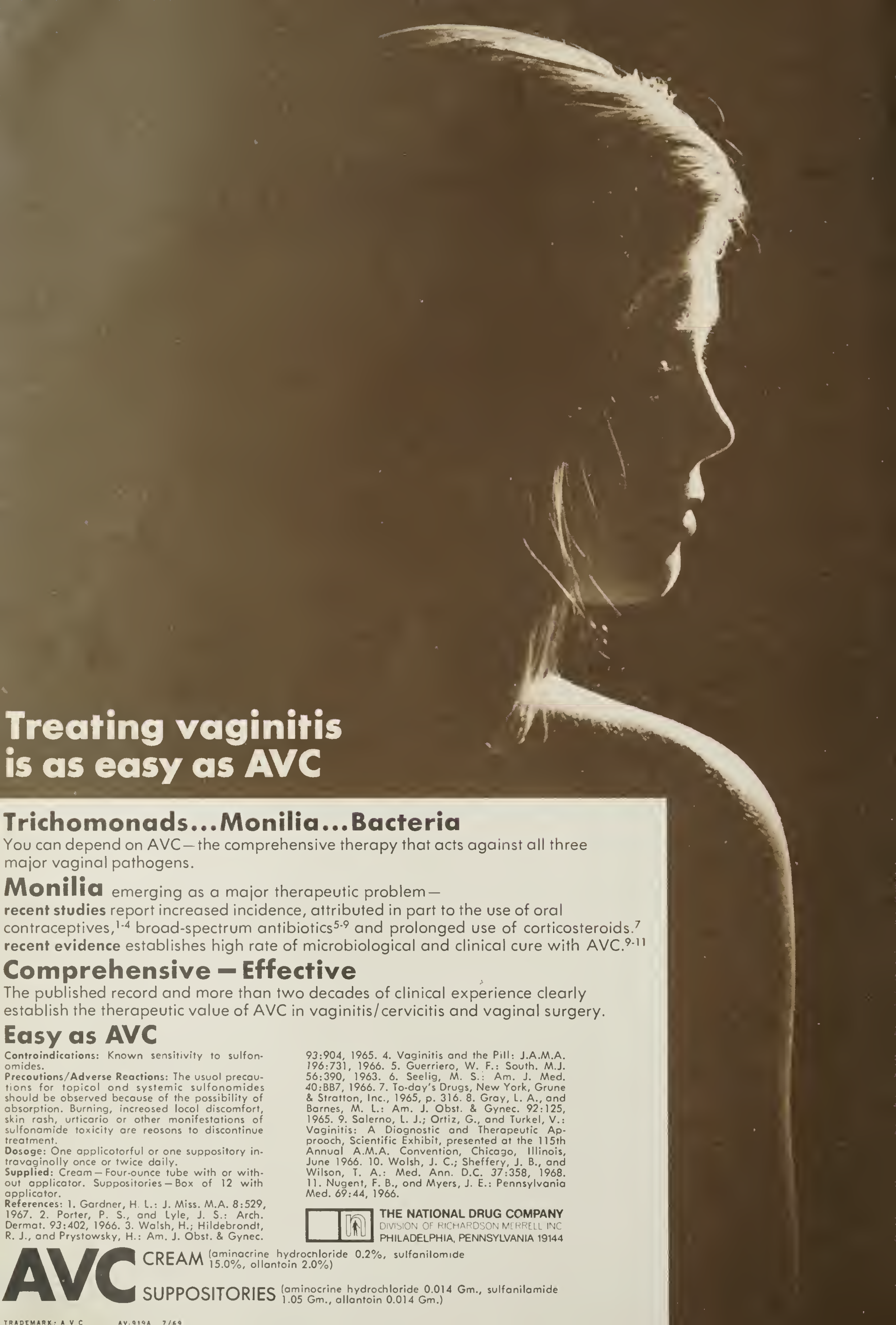

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References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:BB7, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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PENNSYLVANIA MEDICINE

obituaries

○ Indicates membership in the Pennsylvania Medical Society at time of death.

○ **Otto A. Miller,** Ashland; Hahnemann Medical College, 1930; age 63; died December 17, 1969. Dr. Miller was serving his fifth term as coroner of Schuylkill County and had served in the Army Medical Corps during World War II. Surviving are his wife and daughter.

○ **Alan P. Parker,** Bryn Mawr; Jefferson Medical College, 1923; age 68; died January 18, 1970. He was a fellow of the American College of Surgeons, and during World War II was chief surgeon of the Army's Thirty-eighth General Hospital. He is survived by his wife, two sons and three brothers.

○ **Evan C. Reese,** East Stroudsburg; University of Pennsylvania School of Medicine, 1934; age 60; died January 8, 1970. He served in the Army Medical Corps during World War II. Surviving are his wife, his mother, a daughter, a sister, and two sons, one of whom is Evan C. Reese, Jr., M.D., Philadelphia.

○ **Samuel A. Rulon, Jr.,** Phoenixville; University of Pennsylvania School of Medicine, 1909; age 88; died December 26, 1969. He was a general practitioner for more than fifty years and had received the Chamber of Commerce outstanding citizen award in 1958. He is survived by two sons, one of whom is Capt. David B. Rulon, Medical Corps. United States Navy, Washington, D.C,

○ **Manuel Sall,** Philadelphia; Hahnemann Medical College, 1932; age 63; died December 17, 1970. He was a member of the American Neurological Association and the American Psychiatric Association. He is survived by his wife, a daughter, four sons, a sister and four brothers.

○ **John C. Thompson,** Little Rock, Ark.; University of Pittsburgh School of Medicine, 1949; age 44; died December 3, 1969. He formerly had lived in Pittsburgh. He is survived by his brother, Fred B. Thompson, M.D., Pittsburgh.

○ **Philip F. Williams,** Lake Forest, Ill.; University of Pennsylvania School of Medicine, 1909; age 85; died January 13, 1970. He was professor emeritus of obstetrics and gynecology at the University of Pennsylvania School of Medicine, and was a founder of the American College of Obstetrics and Gynecology. He retired from active practice in Philadelphia in 1952, and moved to Illinois two years ago. Surviving are two daughters.

○ **Mahlon H. Yoder,** Lititz; Jefferson Medical College, 1908; age 87; died January 10, 1970. He served in the Army during World War I. He was a general practitioner in Lititz for sixty years, and served as Lancaster County coroner for fifteen years. Surviving are two nephews.

Harry D. Collett, Altoona; Jefferson Medical College, 1928; age 65; died November 30, 1969. He served in the Navy during World War II. Surviving are his wife and a son, William K. Collett, M.D., Gainesville, Fla.

Frank L. Dewees, Newtown Square; Hahnemann Medical College, 1911; age 86; died August 15, 1969. No survivors are listed.

Carl Gordon, Philadelphia; Flower Hospital Medical School, New York, N.Y., 1922; age 76; died November 28, 1969. Surviving are two sisters.

Joseph McEldowney, Buck Hill Falls; Hahnemann Medical College, 1905; age 94; died December 2, 1969. Surviving are his wife and two daughters.

John G. Striegel, Philadelphia; University of Pennsylvania School of Medicine, 1910; age 83; died August 26, 1970. No survivors are listed.

Samuel F. Zahn, Philadelphia; Jefferson Medical College, 1910; age 81; died August 17, 1969. No survivors are listed.

Mark T. Booye, Philadelphia; Medical Chirurgical College, Philadelphia, 1909; age 86; died September 4, 1969. No survivors are listed.

PMS Calendar of Events

May 9 - 3rd Councilor District Meeting, Pocono Manor
May 16 - 2nd Councilor District Meeting, Allentown
May 19 - 5th Councilor District Meeting, PMS Headquarters
May 20 - 4th Councilor District Meeting, PMS Headquarters
May 23 - 12th Councilor District Meeting, Wilkes-Barre
May 24 - 6th Councilor District Meeting (locale to be announced)
June 3 - 11th Councilor District Meeting, New Stanton
June 10 - Physician/Nurse Seminar, PMS Headquarters
Oct. 4-8 - PMS 1970 Annual Business Meeting and Annual Convention, PMS Woman's Auxiliary, Lancaster
Nov. 16-19 PMS Scientific Assembly, Lancaster

PENNSYLVANIA MEDICINE continuing education

A list of educational opportunities offered to physicians in the interest of maintaining their competence and skill. Unless otherwise indicated, all courses are designed for physicians engaged in primary patient care.

ANESTHESIOLOGY

May 14-16, 1970; Pittsburgh

C—**Fourth Annual Symposium on Acute Medicine**; at Pitt; 24 hrs. AAGP credit applied for; $100 fee. Contact Bulent Kirimli, M.D., Director, 1188 Scaife Hall, Pittsburgh 15213.

May 15-16, 1970; Philadelphia

C—**Obstetrical Anesthesia—Emphasis: Conduction Anesthesia**; by Temple at Marriott Motor Hotel. Contact L. W. Krumperman, M.D., Dept. of Anes., Temple; Philadelphia 19140.

CARDIOVASCULAR DISEASE

May 21, 1970; Wilkes-Barre General Hospital

I/AMA—**Drugs and the Heart** (Program of Continuing Medical Education—One Thursday each month); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 26, 1970; Lancaster General Hospital

I—**Pain Patterns in the Master 2-Step Test. The Concept of Impending Angina** (Program in Continuing Medical Education—2 hrs. every other Tues. morning); at FonDerSmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed., Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

May 27, 1970; Sellersville

I/AMA—**Peripheral Vascular Diseases** (Postgraduate Series—1 day ea. mo., 7 months); by Hahnemann; at Grand View Hosp., 2 hrs. AAGP credit. Contact Henry Ruth, M.D., Postgraduate Coordinator, Grand View Hosp., Lawn Ave., Sellersville 18951.

CHEST DISEASES

July 13-24, 1970; Philadelphia (Hahnemann)
September 28-October 9, 1970; Wilkes-Barre V.A. Hosp.

November 30-December 11, 1970; Philadelphia (Hahnemann)

O/AMA—**A Workshop in Respiratory Intensive Care**; by Greater Delaware Valley Regional Medical Program; 10 consecutive days; 8 hrs. ea. day; max. regis.—15; 80 hrs. AAGP credit applied for. Contact R. F. Johnston, M.D., Head, Sect. of Chest Diseases, Hahnemann, 230 N. Broad St., Philadelphia 19102.

May 21, 1970; Pottsville

I/AMA—**Acute Respiratory Failure; Diagnosis & Management** (Cont. Education Program 3rd Wed., 8 mos.); by Hahnemann at Good Samaritan Hosp. Contact Norman M. Wall, M.D., Med. Dir., Good Samaritan Hosp., E. Norwegian & Tremont Sts., Pottsville 17901.

"CODE KEY"

C—Consecutive days
I—Intermittent
O—Circuit
PG—Postgraduate Traineeship
R—Radio
TV—Television
S—Designed for full-time specialists
AMA—AMA Accredited Institution
C E S—Council on Education and Science, Pennsylvania Medical Society
Hahnemann—Hahnemann Medical College and Hospital
Hershey—Milton S. Hershey Medical Center
Jefferson—Jefferson Medical College of Philadelphia
Penn-Grad—University of Pennsylvania, Division of Graduate Medicine
Pitt—University of Pittsburgh School of Medicine
Pitt P.H.—University of Pittsburgh Graduate School of Public Health
Penn State—Pennsylvania State University
Temple—Temple University Health Sciences Center
U. of Pa.—University of Pennsylvania School of Medicine
Woman's—Woman's Medical College of Pennsylvania

ENDOCRINOLOGY

May 21, 1970; Bethlehem

I/AMA—**Medical and Surgical Approaches to Endocrine Diseases: Tumors of Nonendocrine Origin** (Program of Continuing Medical Education); by Jefferson & Penn State; at St. Luke's Hospital; 3 hrs. AAGP credit. $7 fee ($44 for series of 11). Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Phila. 19107.

May 21-22, 1970; Erie

I/AMA—**Use and Misuse of Adrenocortical Steroids** (Program of Continuing Medical Education—1 hr./1st day; 2 hrs./2nd day; 10 weeks; every other Thurs. eve. and Fri. morning); by Jefferson and Penn State; at St. Vincent Hosp.; AAGP credit approved. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 15, 1970; Scranton

I/AMA—**The Diabetic and Surgery** (Program of Continuing Medical Education—3rd Wed. ea. mo., 8 mos.); by Jefferson and Penn State; at Mercy Hosp.; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 20, 1970; Reading

I/AMA—**Adrenal Disorders** (Continuing Education Program—3rd Wed., 8 mos.); by Hahnemann; at Community General Hosp. Contact Paul K. Stolz, M.D., Dir., Cont. Educ., Community General Hosp.; 135 N. 6th St., Reading 19601.

GASTROENTEROLOGY

June 1, 1970; Philadelphia

I/AMA—**Chronic Hepatitis** (Program of Continuing Medical Education); by Jefferson and Penn State; at Methodist Hospital; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

GENERAL MEDICINE

Every Thur day; Hazleton State General Hospital

I—**Program of Continuing Medical Education by Hazleton Branch, Luzerne County Medical Society.** Contact Robert Gunderson, M.D., Suite 412 Northeastern Building, Hazleton, Pa. 18201.

May 12, 1970; Lancaster General Hospital

I—**Problems of Drugs** (Program in Continuing Medical Education—2 hrs. every other Tues. morning); at FonDersmith Auditorium; AAGP credit approved. Contact John H. Esbenshade, Jr., M.D., Dir. Med. Ed. Lancaster Gen. Hosp., 525 N. Duke St., Lancaster 17604.

May 14, 1970; Allentown Hospital

I/AMA—**Use of Antibiotics** (Program of Continuing Medical Education—2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

June 4, 1970; Pottsville Hospital

I/AMA—**Thrombophlebitis—Incidence, Risks, Treatment** (Program of Continuing Medical Education 1st Thursday each month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

June 11, 1970; Allentown Hospital

I/AMA—**Advances in the Concepts of Chemotherapy** (Program of Continuing Medical Education—2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Wanlut St., Philadelphia 19107.

June 10, 1970; West Chester

Malpractice in the Emergency Room; by CES; at Chester County Hosp., 3 hrs. AAGP credit applied for; $5 fee. Contact Mr. Sam Price, CES, Pennsylvania Medical Society, Taylor Bypass and Erford Rds., Lemoyne 17043.

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or

(2) Samuel N. Workman, M.D.
Chief of Clinical Services

(3) Charles W. Neville, Jr., M.D.
Assistant Professor of Psychiatry
and Medical Director

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December 7–11, 1970; Philadelphia

C/AMA—**Emergency Room Care (I Physicians)**; by Hahnemann; at Marriott Motor Hotel; 25 hrs. AAGP credit applied for; $125 fee. Contact Wilbur W. Oaks, M.D., Prg. Dir., Hahnemann, 230 N. Broad St., Philadelphia 19102.

HEMATOLOGY

May 19, 1970; Chester

I/AMA—**The Hematologic Curse of Modern Drug Therapy** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

May 26, 1970; Chester

I/AMA—**Hematologic Manifestations of Systemic Disease** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

INTERNAL MEDICINE

Fourth Tuesday, each month; Altoona Hospital
First Tuesday, each month; Greensburg (Westmoreland Hosp.)
First Thursday, each month; Johnstown (Conemaugh Valley Mem. Hosp.)
Second Tuesday, each month; Natrona Heights (Allegheny Valley Hosp.)
Last Monday, each month; Uniontown Hospital
First Wednesday, each month; Washington Hospital

O/I—**Diagnosis and Management of Hypertension**; by Western Pa. Regional Medical Program and Pitt; AAGP credit applied for. Contact Alvin P. Shapiro, M.D., Project Dir., 501 Flannery Bldg., 3530 Forbes Ave., Pittsburgh 15213.

June 4, 1970; Harrisburg Hospital

The Status of Viral Diseases—1970; by Harrisburg Hosp., Polyclinic Hosp., Hershey, Pa. Dept. of Health and National Communicable Disease Center; 5 hrs. AAGP credit applied for; $10 fee. Contact Thomas F. Fletcher, M.D., Dir. Ped. Educ., Harrisburg Hosp., Harrisburg 17101.

MALIGNANT DISEASE

November 16–19, 1970; Philadelphia

C/AMA—**Cancer Chemotherapy** (2nd Symposium) by Hahnemann; at Sheraton Hotel; 26 hrs. AAGP credit applied for; $125 fee. Contact Isadore Brodsky; M.D., Prg. Dir., Hahnemann; 230 N. Broad St., Philadelphia 19102.

NEUROLOGY

May 13, 1970; Wilkes-Barre

I/AMA—**Muscular Dystrophy** (Postgraduate Series—ea. Wed., six weeks); by Hahnemann; at Wyoming Valley Hosp. Contact David W. Kistler, M.D., Dir., Wyoming Valley Hosp., 149 Dana St., Wilkes-Barre 18702.

May 13, 1970; Wilkes-Barre

I/AMA—**Demyelinating Disease** (Postgraduate Series—ea. Wed., six weeks); by Hahnemann; at Wyoming Valley Hosp. Contact David W. Kistler, M.D., Dir., Wyoming Valley Hosp., 149 Dana St., Wilkes-Barre 18702.

OPHTHALMOLOGY AND OTOLARYNGOLOGY

May 20–23, 1970; Bedford Springs Hotel

C—**Annual Meeting of Pa. Acad. of Ophthalmology & Otolaryngology**; $15 fee—out-of-state members ($35—nonmembers) Pa. members and residents, free. Contact Joseph A. Cipcic, M.D., Secretary, 1501 Locust St., Pittsburgh 15219.

August 3–7, 1970; Pittsburgh

C/S—**The Management of Retinal Detachment**; by Pitt; at Eye & Ear Hosp.; 8 hrs. ea. day; $250 fee; max. regis.: 12. Contact Wm. G. Everett, M.D., Eye and Ear Hosp., 230 Lothrop Street, Pittsburgh 15213.

ORTHOPEDICS

May 26, 1970; Reading

I—**Bone Diseases** (1969–70 Continuing Education Program; 4th Tues. ea. mo.; 8 mos.); at St. Joseph's Hosp.; 1 hr. AAGP credit approved. Contact Kenneth M. Schreck, M.D., Med. Director, St. Joseph's Hosp., Reading 19603.

PEDIATRICS

May 12–15, 1970; Philadelphia

C—**19th Annual Pediatric Postgraduate Seminar**; at St. Christopher's Hospital for Children; 6 hrs. each day; $100 fee. Contact John B. Bartram, M.D., Director, Division of Service to Handicapped, St. Christopher's Hospital, 2600 N. Lawrence St., Philadelphia 19133.

June 10, 1970; Sellersville

I/AMA—**Illness in Children as a Reflection of Family Turmoil** (Postgraduate Series—1 day ea. mo., 7 mos.); by Hahnemann; at Grand View Hosp., 2 hrs. AAGP credit. Contact Henry Ruth, M.D., Postgraduate Co-ordinator, Grand View Hosp., Lawn Ave., Sellersville 18951.

RADIOLOGY AND RADIOISOTOPES

May 12, 1970; Chester

I/AMA—**Heavy Dose Irradiation—When Does It Palliate?** (Program of Continuing Medical Education—Tuesday afternoon, 38 weeks); by Jefferson and Penn State; at Crozer-Chester Medical Center; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

May 26, 1970; Johnstown

I/AMA—**Newer Diagnostic Aspects in Radiology** (Program of Continuing Medical Education—last Tuesday, 7 months); at Conemaugh Valley Memorial Hospital; by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

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PENNSYLVANIA MEDICINE

meetings

MAY

International Academy of Proctology Congress and Teaching Seminar, May 13-22, 1970, Palma, Mallorca, Spain.

Ninth Annual Seminar on Cancer and Diseases of the Breast, May 14-16, 1970, Brown Palace Hotel, Denver, Colo. Contact Wendell P. Stampfli, M.D., c/o St. Luke's Hospital, Denver, Colo.

Pennsylvania Society of Anesthesiologists Annual Meeting, May 15-17, 1970, Chatham Center, Pittsburgh, Pa.

Medical Society of New Jersey 204th Annual Meeting, May 16-19, 1970, Haddon Hall, Atlantic City, N.J.

Sixty-ninth Annual Meeting of the Medical Library Association, May 17-22, 1970, Roosevelt Hotel, New Orleans, La.

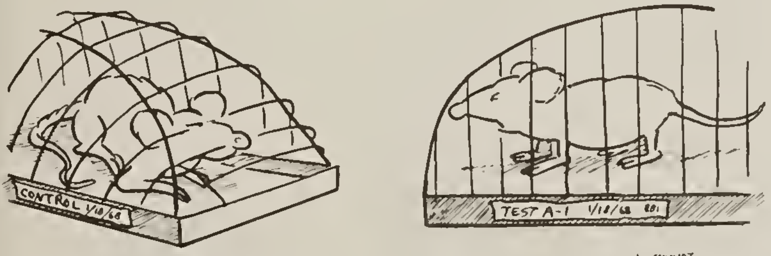
Pennsylvania Academy of Ophthalmology and Otolaryngology Annual Scientific Meeting, May 20-23, 1970, Bedford Springs Hotel, Bedford, Pa. Contact Joseph A. Cipcic, M.D., Secretary, 1501 Locust St., Pittsburgh, Pa. 15219.

Tenth Annual International Cancer Congress, May 22-29, 1970, Houston, Tex. Contact Cancer Congress, Box 20465, Astrodome Station, Houston, Tex. 77025.

American Cancer Cytology Congress, May 30-June 1, 1970, Ocho Rios, Jamaica, British West Indies.

JUNE

American Association for the Study of the Headache, June 20, 1970, Continental Plaza Hotel, Chicago, Ill.



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PENNSYLVANIA MEDICINE

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Books: *The Proceedings of The Artificial Heart Program Conference*, $10.00 from Superintendant of Documents, U.S. Government Printing Office, Washington, D.C. 20402 . . . *The Pill, Facts and Fallacies about Today's Oral Contraceptives*, 329 pp., by R. W. Kistner, Delacorte Press, New York, N.Y. . . . "Dietary Management of Hyperlipoproteinemia," a series of six publications including *A Handbook for Physicians* and five diet booklets for patient use, free from Publications Section, Office of Heart and Lung Information, Building 31, Room 4A10, Bethesda, Md. 20014.

PENNSYLVANIA MEDICINE classified

Psychiatric Residencies-Pennsylvania Hospital with outstanding teaching, therapy and research programs and large medical staff offers fully-accredited, three-year training to physicians desiring certification; Residency includes individual supervision of psychotherapy, experience on adolescent wards, and out-patient therapy of children, college students and adults. Program supplemented by regular, scheduled guest lecturers and three-months intensive graduate lecture course at Eastern Pennsylvania Psychiatric Institute. Excellent salary plus housing and additional benefits. G. P. Grants available. Residencies begin July 1. Also two vacancies for general practitioners. Good salary and housing. Write: Warren State Hospital, Box 249, Warren, Pa. 16365, for details.

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Physician ingeneral medicine wanted- active 200-bed GM&S hospital. Liberal vacation, sick leave, health benefits and retirement plan. Board certified or qualified preferred. GP with good background in internal medicine considered. U. S. citizenship preferred; license any state required. Equal opportunity employer. Contact Hospital Director, Veterans Administration Hospital, Altoona, Pa. 16603.

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General Practitioner urgently needed. Ideal community, diversified industry, northeastern Pennsylvania area; situated in the foothills of the Poconos. Limitless year round recreation facilities available. Accredited hospitals minutes away. Contact Chamber of Commerce, Lansford, Pa. 18232.

Night Duty Physician for emergency non-specialized professional medical care and treatment of tuberculosis patients. Salary $7.87 per hour. Qualifications: Must have license to practice medicine in the Commonwealth of Pennsylvania as issued by the State Board of Medical Education and Licensure, or the State Board of Osteopathic Examiners, or eligibility for such licensure. To apply, write or call: Medical Director, C. Howard Marcy State Hospital, Leech Farm Rd., Pittsburgh, Pa. 15206. Telephone (412) 441-5675; or Medical Director, Henry R. Landis State Hospital, Girard and Corinthian Aves., Philadelphia, Pa. 19130. Telephone (215) 236-9700. EQUAL OPPORTUNITY EMPLOYER.

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General Practitioner: Consider locating in growing Western Pennsylvania, in Darlington area, Beaver County. New industries. Two Hospitals in Beaver Falls, fifteen minutes away. Turnpike ten minutes away. Contact J. B. Swick, Darlington, Pa. 16115.

Pennsylvania Licensed Physician – available January 1, 1970 to cover out-patient emergency service in 274-bed accredited general hospital. Five days a week, 8 a.m. to 5 p.m. Write: Office of Administrator, Lower Bucks Hospital, Bristol, Pa. 19007.

General practitioner urgently needed. Ideal country practice; clean air, good water, hunting, fishing and golfing. Six miles to accredited open hospital. Will aid financially if necessary. Contact Salisbury Lions Club, Salisbury, Pa. 15558.

Emergency Room Physician – full-time; accredited 300-bed general hospital; active approved internship and residency programs; excellent benefits. Submit resume to: Administrator, Robert Packer Hospital, Sayre, Pa. 18840.

Emergency Room Physician; central Pennsylvania ; 175-bed hospital. Pennsylvania license required. Near Pennsylvania State University. Salary negotiable. Contact Richard West, Administrator, Centre Community Hospital, Bellefonte, Pa. 16823. Telephone (814) 355-4801 collect.

Physicians wanted: male and female, licensed, for children's camps, July-August. Good salary; free placement; 350 member camps. Write: Dept. P, Association Private Camps, 55 W. Forty-second St., New York, N. Y. 10036. Telephone (212) OX 5-2656.

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Fertility and Sterility, January 1970
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Results: Of the patients receiving the active medication (Android) a favourable response was seen in 78%. This compares with 40% with those on placebo. 80% of the patients treated with the active ingredients showed relief in fatigue compared with 42% of those receiving the placebo. Although psychotherapy is indicated in patients suffering from functional impotence the concomitant role of chemotherapy (Android) cannot be disputed.

Contraindications – Methyltestosterone is not to be used in malignancy of reproductive organs in male, coronary heart disease Thyroid is not to be used in heart disease, hypertension unless the metabolic rate is low.

References: 1. **Montesano, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence Clin Med 12-69, 1966 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound West Med 5.67, 1964 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence Gen Prac 25-6, 1962 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79 863, 1958 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432 7. **Wershub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99

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Methyl Testosterone ..2.5 mg.
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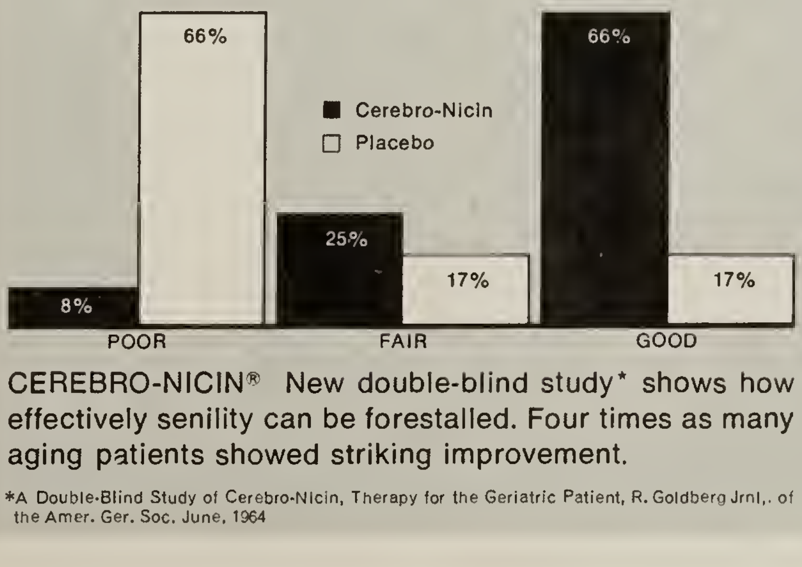

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*A Double-Blind Study of Cerebro-Nicin, Therapy for the Geriatric Patient, R. Goldberg Jrnl,. of the Amer. Ger. Soc. June, 1964

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PENNSYLVANIA MEDICINE

in my opinion

Is the Coffee Break Expendable?

Have you ever wondered about the role the coffee break plays in the recent upward spiral of the cost of hospital care? The average 300 bed hospital with two personnel per patient would contain a minimum of 600 people taking two coffee breaks a day. While coffee breaks are supposed to be fifteen minutes, more often than not, they come closer to thirty minutes considering time to and from the coffee shoppe. Mathematically, this translates to about 600 man hours a day spent on coffee breaks (during working hours, naturally). If the average wage, (administrators, pharmacists, nurses, technicians, aides, etc.) is about $3.00 an hour, this amounts to $1,800 daily, $54,000 monthly, or $648,000 yearly just for coffee breaks in terms of time spent away from the job. And this does not include the cost of the coffee!

Not so long ago, coffee was five cents a cup. Now at many places it's up to twenty cents. These 600 people in a year would consume about 432,000 cups of coffee if each coffee drinker limited himself to one cup (some don't). At the old price this would amount to $21,000; but today, inflation makes the bite $84,000.

So far then, a calculation of the cost of the coffee break to the typical 300 bed hospital is $648,000 plus $84,000; a staggering $732,000!!! And this without counting the wear and tear on the elevators, stairs, cafeteria, water supply, coffee cups, etc. These other costs could easily bring this figure, actually very conservatively estimated, up to an incredible ¾ of a million dollars per 300-bed hospital.

Inevitably then must arise the question: What hospital, if any, is willing to take the necessary steps to be truly innovative about the delivery of health care and to make a serious effort to control its cost? Who is ready to reduce the cost of medical care substantially by pointing out that the coffee break is no longer relevant if it costs over $34 million yearly in Allegheny County's forty-six hospitals alone? After all, if the hospitals don't do it, the government will, we may be told. Admittedly, it would take a degree of bravery not ordinarily found in hospitals to be willing to face the wrath of the coffee drinkers. The two-cuppers would be especially militant. Just envision the pickets, the demonstrators, the coffee-ins, the demands for equal status on the hospital boards, and the National Guard in the corridors observing the placards proclaiming "The Coffee Break Is A Human Right." And who would be protesting the most? That's right, those whose voices have been trumpeting the loudest: "Bring down the cost of medical care."

The Janus-like stance of big government is a good example. On the one hand it passes laws escalating minimum wages and making coffee breaks mandatory thus inflating costs, and on the other loudly proclaims that the cost of medical care must be brought down. In circumstances like this, it is difficult to keep from developing a cynical attitude about what out politicians say versus what they do. One is easily tempted to believe that lowering costs is of no consequence to them. For isn't it government that will always have an answer—always, naturally, costing more money? Politicians are recommending drastic actions in order to control hospital costs—let's see what they do about this one.

Patrick J. McDonough, M.D., Associate Editor
Bulletin of the Allegheny County Medical Society

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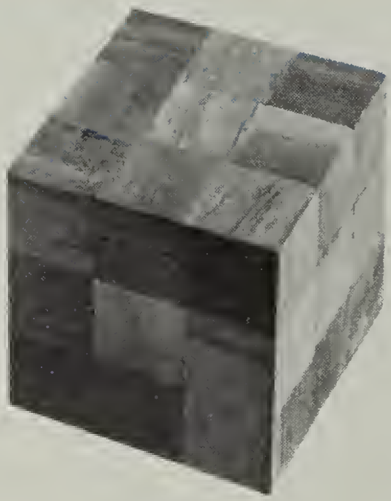

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Adults: Two tablets, orally, four times per day, followed by liberal fluid intake.

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Precautions: Administer with caution to persons with known idiosyncrasy to atropine and cardiac disease. While under this therapy the urine is blue; patients should be so advised to allay apprehension.

Side Effects: Neither irritation nor untoward reactions have been reported; however, if pronounced dryness of the mouth, flushing, or difficulty in initiating micturition occurs, decrease dosage. If rapid pulse, dizziness or blurring of vision occurs, discontinue use immediately. Acute urinary retention may be precipitated in prostatic hypertrophy.

Contraindications: Glaucoma, urinary bladder neck or pyloric obstruction, duodenal obstruction and cardiospasm. Hypersensitivity to any of the ingredients.

How Supplied: Bottles of 100, 500 and 1,000 tablets.

References: (1) Sands, R. X.: New York St. J. Med. 61:2598-2602, 1961; (2) Renner, M. J., et al.: Hosp. Topics 39:71-73, 1961; (3) Haas, Jr., J., and Kay, L. L.: Southwest. Med. 42:30-32, 1961; (4) Marshall, W.: Clin. Med. 7:499-502, 1960; (5) Strauss, B.: Clin. Med. 4:307-310, 1957.

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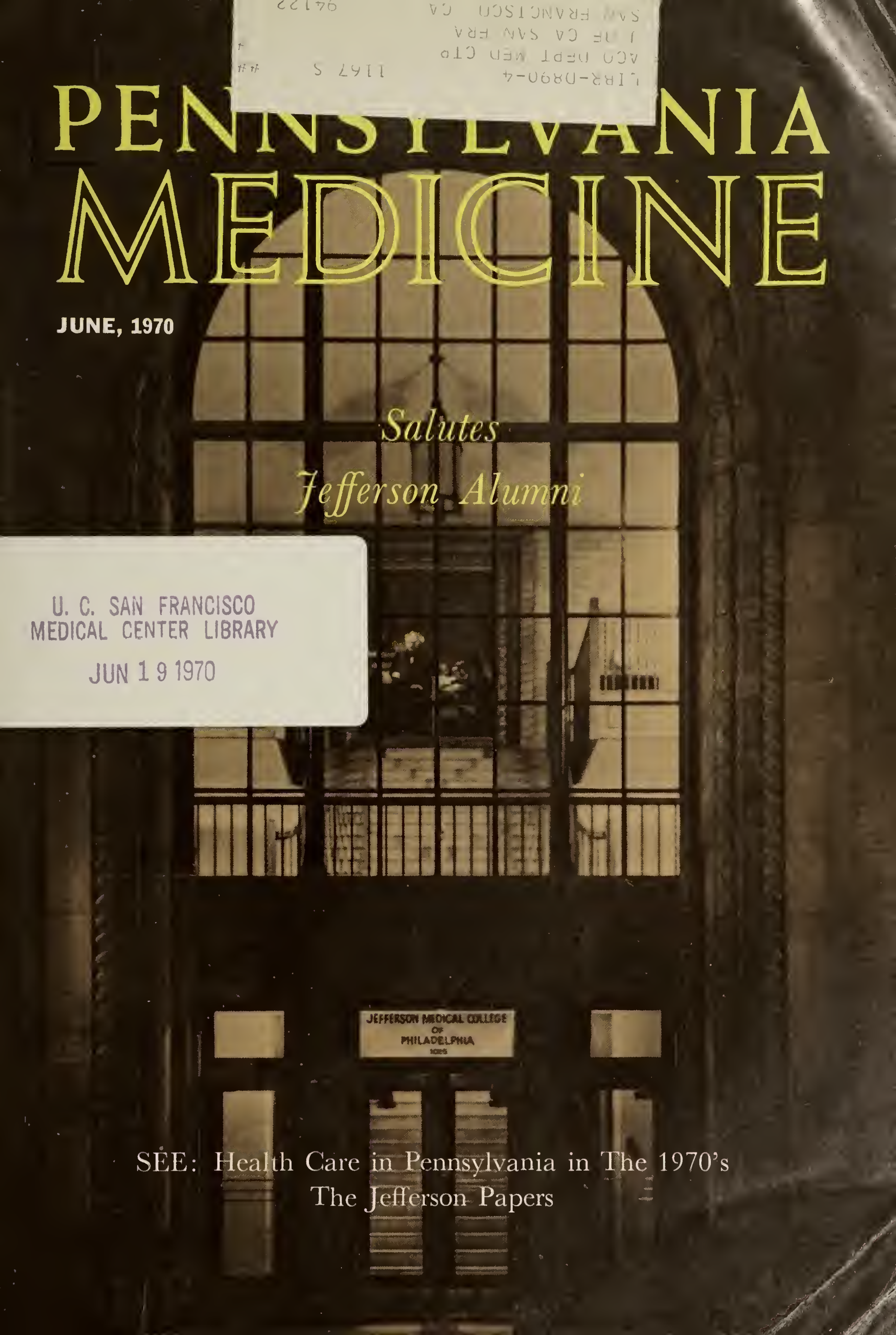

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Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. *Sympathomimetic cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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PENNSYLVANIA MEDICINE

/medigram

JUNE, 1970

GUBERNATORIAL CANDIDATES SPEAK Republican candidate for governor Raymond J. Broderick, and victor in the Democratic gubernatorial primary, Milton Shapp, spoke at the PaMPAC workshop May 28. R. Edward Steele, M.D., Harrisburg, moderated the session at which each candidate spoke for fifteen minutes, and then fielded questions from workshop participants. Shapp and Broderick face each other in the general election November 2.

BOARD APPROVES COUNCIL APPOINTMENTS The Board of Trustees has approved recommendations of president-elect William A. Limberger, M.D., of the following as chairmen and vice-chairmen of the councils of the State Society: Council on Education and Science--Richard B. Magee, M.D., Blair County, chairman; Jerome Chamovitz, M.D., Allegheny County, vice-chairman. Council on Governmental Relations--Edgar W. Meiser, M.D., of Lancaster County, chairman; George W. Shaffer, M.D., Bucks County, vice-chairman. Council on Medical Service--Robert P. Dutlinger, M.D., Dauphin County, chairman; John Helwig, Jr., M.D., Philadelphia County, vice-chairman. Council on Public Service--Kenneth L. Cooper, M.D., Lycoming County, chairman; Robert N. Moyers, M.D., Crawford County, vice-chairman. In addition, Malcolm W. Miller, M.D., of Philadelphia County, was appointed chairman of the Committee on Relationships With Allied Professions.

MALPRACTICE DRAMA SCHEDULED The one-act medical drama, "Malpractice in the Emergency Room," is scheduled for June 10 at Chester County Hospital, West Chester. Three hours of AAGP credit has been requested. Fee is $5.00. Contact Mr. Sam Price, PMS Council on Education and Science, for further information. The drama, which features Philip K. Hensel, M.D., Irwin Benjamin, Esq., Thomas B. Rutter, Esq., and William J. O'Brien, Esq., will be shown also at the socio-economic seminar at the PMS Annual Session.

BOARD REAPPOINTS DR. KELLY William J. Kelly, M.D., Pittsburgh, has been reappointed by the PMS Board of Trustees as its representative to the State Board of Medical Education and Licensure. Dr. Kelly is Tenth District Councilor.

DONALDSON AWARDS PRESENTED The PMS Walter F. Donaldson awards for outstanding reporting of medical news by newspapers and radio and television stations were made last month. In the newspaper division, Donald C. Drake of the *Philadelphia*

Inquirer and David M. Hennigan of the *Lancaster Intelligencer Journal*, received plaques and prizes at the Pennsylvania Press Conference. In television the awards went to WFIL-TV, Philadelphia, and WTPA-TV, Harrisburg. WDAS, Philadelphia, and WCHE, West Chester, received the radio awards, along with WTEL, Philadelphia, which received an honorable mention. Radio and television presentations were made during the annual convention of the Pennsylvania Association of Broadcasters.

CONGRESSIONAL VISITATION SET The PMS Annual Congressional Visitation is scheduled for June 17 with headquarters at the Statler Hotel in downtown Washington, D.C. Members of the Council on Governmental Relations, PaMPAC Board of Directors, PMS trustees and councilors, and executive secretaries of county medical societies will attend the session which will open with luncheon and briefing by the AMA Washington staff and will feature a reception for Pennsylvania's congressmen and senators at the Rayburn House Office Building.

WOMEN'S CLUBS HONORED The Pennsylvania Federation of Women's Clubs received a special award from the Pennsylvania Medical Society for its action in the fields of drug abuse and health at its annual convention in Harrisburg in May. The Federation provided $10,000 to the State Society to help pay for production of television spot announcements.

JUDICIAL COUNCIL NOMINATIONS MADE The PMS Board of Trustees has submitted nominees for the upcoming vacancy on the Judicial Council for consideration of the House of Delegates during Annual Session in October. The vacancy occurs with the expiration of the term of H. Malcolm Read, M.D., York, who has served two terms and is ineligible for reelection. The nominees are: Daniel H. Bee, M.D., Indiana County; M. Louise Gloeckner, M.D., Montgomery County; Clarence J. McCullough, M.D., Washington County; and R. Frederick W. Ward, M.D., Northampton County.

DO INVOLVEMENT APPROVED At the recommendation of the Council on Medical Service, the PMS Board approved the appointment of osteopathic physicians to serve on the Western Pennsylvania PMS-Blue Cross Regional Steering Committee as full members with the extent of osteopathic representation to be determined by the steering committee.

MEDICAL PRACTICE ACT REVIEW STARTED A committee of the Pennsylvania Medical Society and members of the State Board of Medical Education and Licensure will study in depth the Medical Practice Act to determine what changes should be made to many outdated sections. Changes in the act require the introduction of legislation and the study will result in recommendations to the Board for such legislation.

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(1) Siver, R. H.: CMD, 21:109, September 1954. (2) Frykman, H. H.: Minn. Med., 38:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., 51:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., 15:15-16, October 1965. (5) Weekes, D. J.: NY State Jour. Med., 58:2672-2673, August 1958. (6) Ellis, S. and Spratt, J. S.: JOUR. AMER. GER. SOC., 18:410-415, May 1970.

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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient, reversible, nephrogenic diabetes insipidus with excessive thirst and polyuria (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

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Loridine®
CEPHALORIDINE

Please turn page for prescribing information.

Actions: All tested strains of group A streptococci, pneumococci, and penicillin-G-susceptible staphylococci are susceptible to Loridine® (cephaloridine, Lilly). However, some strains of penicillinase-producing staphylococci are resistant in vitro to concentrations of Loridine that can be achieved in the serum. The majority of strains of *Hemophilus influenzae*, *Proteus mirabilis*, *Escherichia coli*, and *Klebsiella* are also susceptible in vitro.

Pseudomonas organisms are resistant to Loridine, as are most indole-producing *Proteus* species and motile *Aerobacter* species.

Indications: Indicated in the treatment of serious infections of the respiratory tract, genito-urinary tract, bones and joints, bloodstream, soft tissue, and skin due to susceptible strains of the organisms listed above; in early syphilis when penicillin may be contraindicated (*see* Warnings in regard to cross-sensitivity with penicillin); and in gonorrhea when penicillin is not considered the drug of choice.

Loridine should not be used until culture and sensitivity tests show that the organism is susceptible to its action and until renal status of the patient has been determined. For this reason, the drug should not normally be used to initiate therapy. Culture and sensitivity tests are not feasible for patients with syphilis; results of such tests are usually not available before antibiotic treatment of gonorrhea is given.

Contraindications: Azotemia. Hypersensitivity to cephaloridine or cephalothin.

In its present form, Loridine is poorly absorbed from the gastro-intestinal tract and should be given only by injection. Because of slower excretion in patients with impaired renal function, their total daily dosage should be proportionately less than that for persons with normal renal function.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN C DERIVATIVES SHOULD BE USED WITH GREAT CAUTION. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS. INSTANCES OF PATIENTS WHO HAVE HAD SEVERE REACTIONS TO BOTH DRUGS, INCLUDING DEATH FROM ANAPHYLAXIS, HAVE BEEN REPORTED.

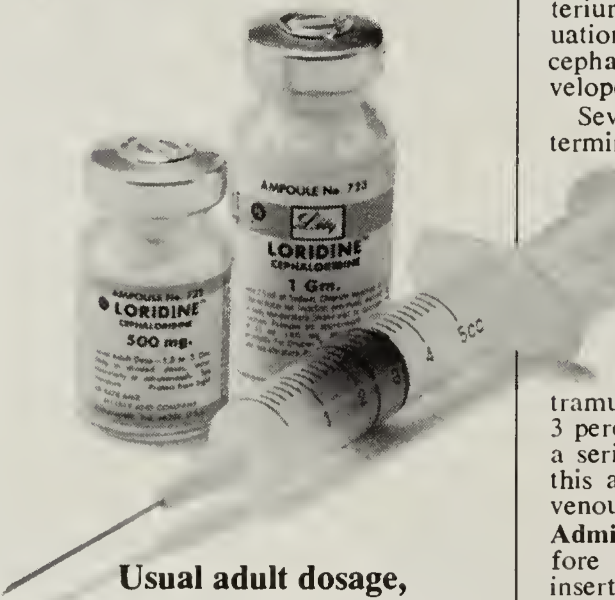
Because of nephrotoxicity (e.g., tubular necrosis) of cephaloridine in dosages above 4 Gm. daily (*see* Adverse Reactions), recommended doses should not be exceeded. Patients with known or suspected impairment of renal function should be under close clinical observation for changes in renal function or be hospitalized. If impaired renal function develops during therapy, cephaloridine should be discontinued. Cephaloridine should not be used in patients with azotemia. When renal impairment is present, use the drug with caution and reduce the dose. Casts in the urine, proteinuria, falling urinary output, or a rising BUN or serum creatinine may indicate impairment of renal function. Give cephaloridine cautiously when it is used with other antibiotics having nephrotoxic potential.

Precautions: Protect ampoules from light. Extemporaneous mixtures with other antibiotics are not recommended.

In infections due to beta-hemolytic streptococci, continue antibiotic therapy for at least ten days to prevent the possible occurrence of rheumatic fever or glomerulonephritis in susceptible patients. In gonorrhea, patients with suspected concomitant syphilis should have dark-field examinations of all suspect lesions before treatment and monthly serologic tests for a minimum of three months. Indicated surgical procedures should be performed.

Superinfections may develop with organisms not in the spectrum of Loridine, particularly *Pseudomonas*. These can be recognized by clinical observation and by means of appropriate cultures. If they occur, take proper therapeutic measures.

Loridine®
CEPHALORIDINE



Usual adult dosage, 1.5 to 3 Gm. daily, is effective against many moderately severe infections due to susceptible organisms.

Safety for use during pregnancy has not been established.

Since safety in premature infants and infants under one month of age has not been established, cephaloridine in these patients is not recommended.

A few patients have developed positive direct Coombs tests during cephaloridine treatment. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received Loridine® (cephaloridine, Lilly) before parturition, a positive Coombs test may be due to the drug.

A false-positive reaction for glucose in the urine may occur with Benedict's or Fehling's solution or with Clinitest® tablets but not with Tes-Tape® (urine sugar analysis paper, Lilly).

Adverse Reactions: Urticaria, skin rash (maculopapular or erythematous), and itching without discernible skin changes have been observed in about 3 percent of patients. Some of these were known to be allergic to penicillin. Others with known allergy to penicillin have been given Loridine without difficulty. Approximately 1 percent of patients treated with Loridine have had a rise in eosinophil count. Eosinophilia reached 10 percent in about half of these. A few instances of drug fever have been reported.

A few cases of leukopenia have been reported. Elevations of transaminase were observed in a small percentage of patients. In most instances, the elevations were in a single determination when other parameters of liver function were normal, and only rarely was a level of 100 units reached. In a few cases, similar elevations of alkaline phosphatase were found. The significance of these observations is uncertain.

In controlled studies on forty-three healthy persons given 2 Gm. cephaloridine intramuscularly twice daily for four weeks, no significant changes were observed in BUN, alkaline phosphatase, SGOT, reticulocyte count, or monocyte count in the blood. No disturbances in hemoglobin or red-blood-cell count were ascribable to administration of Loridine. However, all of five nonazotemic patients with chronic bacteriuria who had careful renal function evaluation before and after a ten-day course of cephaloridine in dosages of 2 Gm. per day developed impairment in free water clearance.

Severe, acute renal failure, in some cases terminating in death, has occurred in a small number of patients. The possibility of this complication seems to be greater in seriously ill patients given more than recommended doses. Acute tubular necrosis has been found in affected patients coming to autopsy. Rare cases of nausea and vomiting have occurred. Pain in association with intramuscular injection was noted in less than 3 percent of patients. In only one patient in a series of 623 was the route changed on this account. Phlebitis at the site of intravenous injection has been rare.

Administration and Dosage: *Important*—Before administering Loridine, see package insert for details on dilution.

Intramuscular Injection—Loridine is usually injected into a large muscle mass.

The usual adult dosage for many infections of moderate severity is 500 mg. to 1 Gm. three times a day at equally spaced intervals. Milder and more susceptible infections have been treated with 250 to 500 mg. given two or three times a day. More severe infections may be treated with 500 mg. to 1 Gm. four times a day. A single 2-Gm. dose is recommended for the treatment of acute gonorrhea. Early syphilis may be treated with 500 mg. to 1 Gm. daily for ten to fourteen days.

Although some clinical experience with high doses for life-threatening conditions has been reported, it has been shown that excessive dosages (above 4 Gm. daily) may cause serious nephrotoxic reactions. For this reason, Keflin® (sodium cephalothin, Lilly) may be preferred when doses larger than 4 Gm. daily are considered for life-threatening situations. If more than 2 Gm. of cephaloridine is injected daily, the patient should be under close clinical observation for changes in renal function or be hospitalized. In addition, reduced dosage should be employed in patients with known or suspected renal impairment.

In children, a daily total of 30 to 50 mg. per Kg. (15 to 25 mg. per pound) of body weight, given in divided doses, has been found effective for mild to moderately severe infections. A daily total of 100 mg. per Kg. (50 mg. per pound) of body weight (not to exceed recommended adult doses) may be needed for very severe infections.

Intravenous Injection—In the presence of extremely serious infections (such as bacteremia) or when any infection seems overwhelming, intravenous administration may be indicated.

Total daily dosages are the same as with intramuscular injection. For very susceptible organisms, 500 mg. to 1.5 Gm. per day may suffice; for less susceptible organisms and for serious infections, 2 to 4 Gm. per day may be needed.

How Supplied: Ampoules Loridine® (cephaloridine, Lilly), 500 mg., 5-ml. size, rubber-stoppered; 1 Gm., 10-ml. size, rubber-stoppered. [082169]

Additional information available upon request.
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Lilly

000903

Health Care is Conference Theme

The delivery and financing of health care in the 1970's was the theme of the PMS Officers Conference April 22 and 23 at the Penn Harris Motor Inn, Camp Hill.

Over 200 medical society leaders from throughout Pennsylvania heard speakers discuss the various solutions to the problems of delivery of health care and methods of financing medical care at panel discussions which included audience participation.

PMS President William A. Barrett, M.D., keynoted the session with his opening remarks. He told representatives: "The financing and delivery of health care will be affected to a greater or lesser degree by physician response to public demands." He included plans for the training and greater use of paramedical personnel as a must in order to meet the demand for health services. He said, "The Himler Report is a milestone which will require physicians to rechart the course for the '70's. Leadership on the part of physicians is a must."

Charles A. Bikle, M.D., of the Officers' Conference Committee was moderator of a panel discussion on the financing of health care in the 1970's. Participants included Isadore S. Falk, Ph.D., professor emeritus of public Health, Yale University, New Haven, Conn.; Russell B. Roth, Erie, speaker of the AMA House of delegates; and Robert A. Albright, vice-president, United States Steel Corp. and the Carnegie Pension Fund.

Dr. Bikle set the scene for the panel and the audience by outlining the various methods of financing health care which have been proposed.

"Of this we can be sure," Dr. Bikle said, "health care ten years from now will be different. We are not sure how it will be financed and this is the question under discussion."

Dr. Falk outlined the reasons for the deep concern about health care in the United States as follows: shortage of manpower, inadequacy of the system of delivery of care, escalation of health costs, and lack of controls for quality care.

He said, "Private health insurance has made massive successes in numbers covered, but takes care of only about one-third of the actual costs of health care."

He reiterated the view that health care is a right of all people, without financial barriers and without discrimination as to the type of services provided.

"Organized, systematic, comprehensive group practice is the only answer as regards delivery," Dr. Falk declared, "and national health insurance, embracing medicare and medicaid, is the only answer as regards payments."

He estimated that sixty to sixty-five billion dollars annually is spent on health care in the nation, and called on the providers of health care to live within a system including national health insurance, and to provide leadership in its establishment.

Robert A. Albright said a partnership of public and private methods of

Drs. Eddinger and Pollock, left and center, receive awards from Dr. Barrett.

payment for health care is the answer of choice.

"I believe that a system of fee for service, not pre-paid care, is desirable," he said.

The job of covering all people with insurance for health care is by no means complete, Mr. Albright said, but he added, "Private sector insurance can do the job better and cheaper."

Mr. Albright said the physician is the key to making the most of using preventive medicine, extended care facilities and other means to provide quality care at the lowest cost.

Russell B. Roth, M.D., expressing doubts about the ability of government to solve the alleged crisis in health care, called on the federal government to simplify and unify the numerous health care agencies scattered throughout the government as an initial step in cutting costs and making greater use of what is available.

He said voluntary health insurance can serve as a means of financing health care and noted that pre-paid group practice plans offer a competitive solution.

Dr. Roth said, "There are less than 300,000 physicians and osteopaths in the country. We need more doctors, and we need to give them more help to extend their hands. They are overworked and conscientious. Despite this, we must admit that not all those who need medical care receive it. We must decide what a responsible and responsive medical profession is to do to address itself to the problems in the delivery of medical care, and payment is not the only barrier. Money is not the primary motivation of physicians. So-called 'greed and avarice' on the part of physicians are assumed by critics of the profession when health costs rise . . . there must be a recognition of the fact that it is currently impossible to provide all the needs for quality health care – we do not have the people or the bricks and mortar."

"The Delivery of Health Care in the 1970's" was the theme of the second general session.

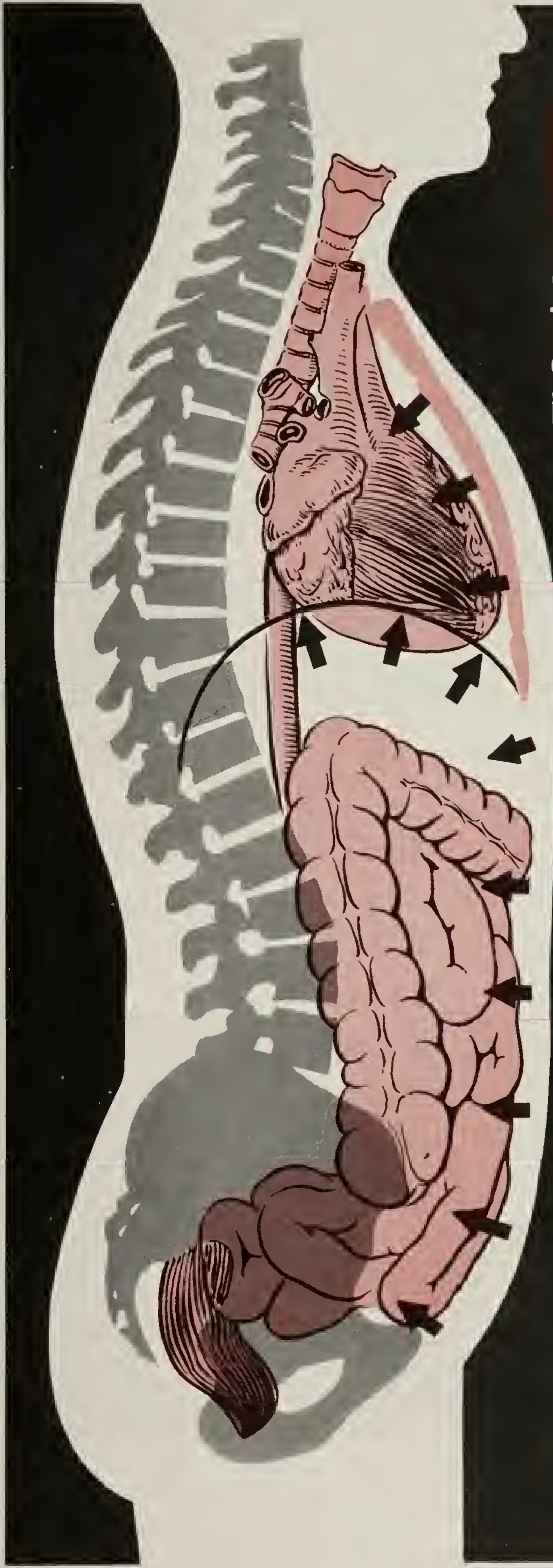
Valentine R. Manning, M.D., chairman of the Officers' Conference Committee, presided at the session. David W. Kline, M.D., member of the committee, was panel moderator.

Emery Bullis, of the Health Services and Mental Health Administration of the Department of Health, Education and Welfare, said there must be a modification of the traditional system of delivery of health care if we are to be truly responsive to the consumer.

D. Robert Howard, M.D., director of the physicians assistant program at Duke University, Durham, N. C., restated the fact that people consider medical and health services as a right. He said, "We must survive through the '70's and plan for the '80's. The medical industry should prepare itself to lead and control the system of delivery of health care, even in the face of national health insurance."

He explained Duke's program of training physicians' assistants, pointing

Dr. Barrett opens the conference in the left hand photograph. On the right, Dr. Himler presents his report.



DOXIDAN®

...to reduce the hemodynamic "bind" of constipation in congestive heart failure

Constipation in the chronic heart failure patient carries with it the ever-present threat of acute cardiac decompensation while straining at stool. In the already weakened, distended heart, a sudden influx of blood on termination of the Valsalva maneuver is considered to be the mechanism of some of the deaths occurring in these cardiac patients during straining efforts.*

Doxidan is a gentle laxative designed to free your patient from the hemodynamic consequences of straining at stool. With a fecal softening agent to keep the stool soft and easy to evacuate, and with just enough peristaltic stimulation to urge the sluggish bowel, Doxidan reduces the hemodynamic "bind" of constipation.

Composition: Each capsule contains 50 mg. danthron N.F. and 60 mg. dioctyl calcium sulfosuccinate.

Dosage: Adults and children over 12—one or two capsules daily. Children 6 to 12—one capsule daily. Give at bedtime for two or three days or until bowel movements are normal.

Supplied: Bottles of 30, 100 (FSN 6505-074-3169) and 1000 (FSN 6505-890-1247).

*Best, C. H. and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 7th edition, Williams and Wilkins, Baltimore, 1961, p. 480.

DOXIDAN®

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C-124

Dr. Horton, left, presents awards to Mr. Craig and Miss McMaster for twenty years of service.

out ex-medical corpsmen are excellent candidates for the training.

Dr. Howard said, "We have six requests for every graduate of the program, and have found that a trained assistant can increase a physician's productivity by 75 per cent." He said legislation should be changed to permit a physician to delegate duties, rather than to license the assistants.

George Himler, M.D., chairman of the AMA Committee on Planning and development, whose widely-publicized report is being presented this month to the AMA convention, spoke of the work of the committee and some conclusions reached. Excerpts of his remarks appear elsewhere. (See page 45.)

L. Bennett Coy, conservationist from Miami, Ohio, spoke at the dinner at which two veteran PMS staff members were honored. Velma L. McMaster, staff assistant to the Council on Education and Science, and Robert H. Craig, Jr., executive assistant to the Council on Governmental Relations, received certificates for twenty years of service with the society.

At the luncheon which closed the conference, with PMS Board Chairman Park M. Horton, M.D., presiding, two physicians were recipients of the "Golden Voice of Medicine" award for their service on behalf of the PMS Speakers' Bureau. The awards were given to Leo C. Eddinger, M.D., Allentown, and Arthur E. Pollock, M.D., Altoona.

Highlight of the luncheon *which closed the 1970 Officer's Conference was the awarding of $500 scholarships to a first-year medical student from each of Pennsylvania's seven medical colleges. Winners were chosen from among those who submitted essays on the subject: "Is There a Generation Gap in Medicine?" Shown above, right, is William B. Lamberton, M.D., chairman of PaMPAC's scholarship awards committee, with the winners, left to right, Noel Cawley, Woman's Medical College; Alan D. Stewart, University of Pennsylvania Medical School; Karl E. Williams, University of Pittsburgh Medical School; Donald S. Prough, Pennsylvania State University College of Medicine; Ralph S. Sando, Temple University School of Medicine; Samuel S. Fager, Hahnemann Medical College and David Jacoby, Jefferson Medical College.*

NOTICE TO PMS MEMBERS

A Special Report from the Board of Trustees and Councilors giving the status of all resolutions considered by the 1969 House has been mailed to presidents, secretaries, executive secretaries and delegates. Any member wishing a copy may obtain one by sending a post card to PENNSYLVANIA MEDICINE requesting "Resolutions, 1969."

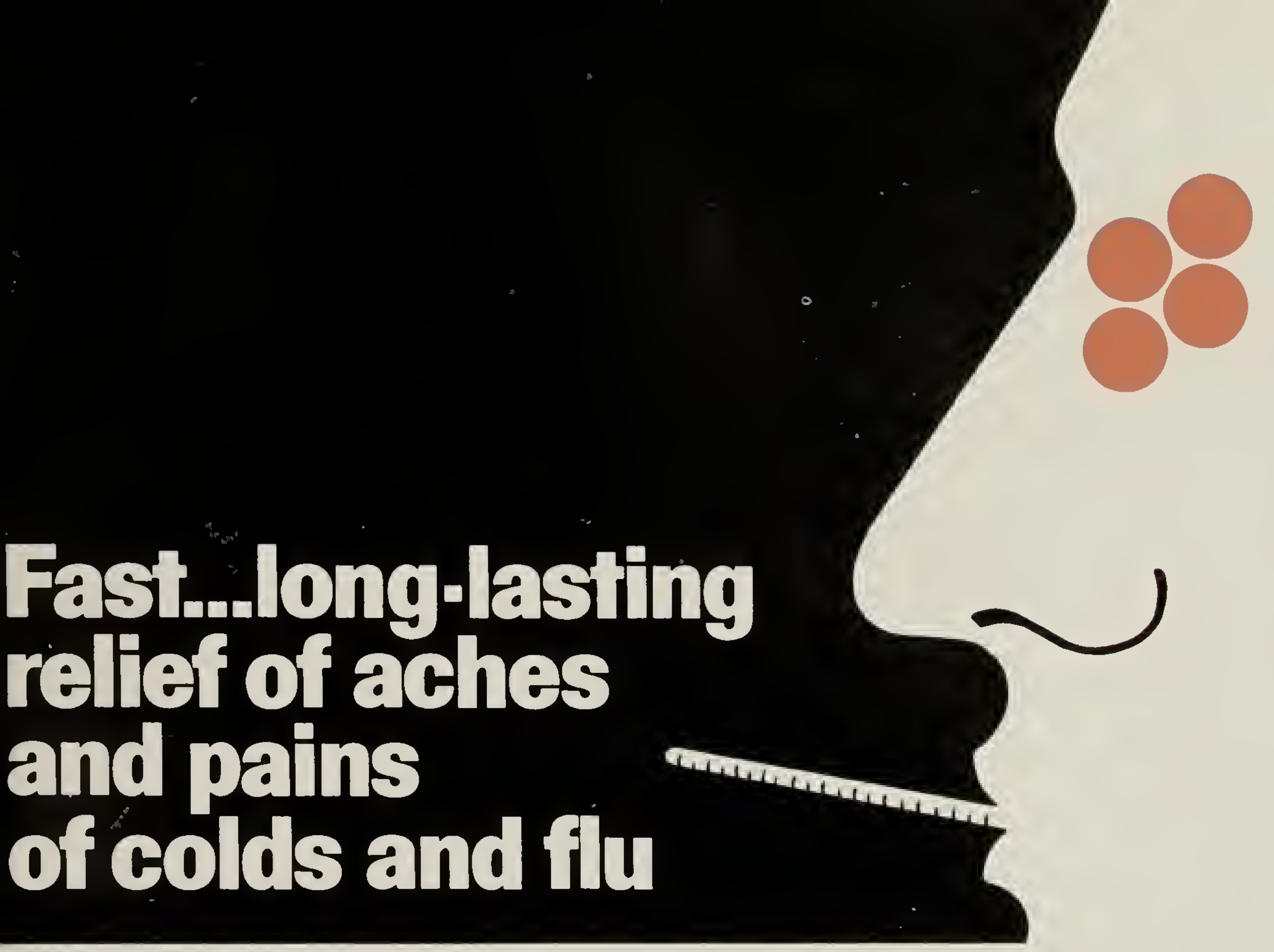
Pittsburgh M.D. Heads Group

Merle Bundy, M.D., of Pittsburgh, is the new president of the Industrial Medical Association. He received the gavel from the retiring president, Duane L. Block, M.D., at the association's annual business session held recently in Chicago.

Dr. Bundy is director of industrial medicine for United States Steel Corp. and is clinical assistant professor of occupational medicine at the University of Pittsburgh Graduate School of Public Health.

Gilbert B. Meyers, M.D., Philadelphia, was named to the board of directors of the association. He is eastern regional medical director for Mobil Oil Corp., Philadelphia, and assistant professor of clinical medicine at Hahnemann Medical College.

Pennsylvanians named fellows of the Industrial Medical Association at the Chicago meeting are: Joseph M. Dechter, M.D., Homestead, Colin M. Kamperman, M.D., New Kensington, and George R. Shore, M.D., Pittsburgh.



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with the unique timed-release aspirin

Double strength Measurin timed-release aspirin offers a new kind of control for your patients with cold and flu discomforts. In each 10-grain tablet are over 6,000 microscopic reservoirs that release aspirin at a controlled rate—some right away and some later on. This means fast relief of symptoms, followed by hours of comfort. Throughout the day, Measurin gives your patients freedom from a 4-hour aspirin schedule. During the night, its 8-hour dosage schedule holds the promise of sound sleep without awakening to take extra tablets.

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MEASURIN®
TIMED-RELEASE ASPIRIN

ECONOMICAL • EFFECTIVE • LONG LASTING PAIN RELIEF

Dosage: 2 tablets followed by 1 or 2 tablets every 8 hours as required, not to exceed 6 tablets in 24 hours. For maximum nighttime pain relief, 2 tablets at bedtime.
Available: Bottles of 12, 36 and 60 tablets.

Jefferson Alumni Celebrate

The Alumni Association of Jefferson Medical College celebrated its founding 100 years ago early in May at a two-day meeting which combined class reunions and scientific assemblies with grand rounds and a grand finale appearance of the London Philharmonic Orchestra in its first tour of the United States.

The largest medical school alumni in the United States, 7,000 strong – 3,000 being Pennsylvania physicians – used Jefferson Hall, completed in 1968, as headquarters for the centennial celebration.

Following the President's Luncheon on the second day of the reunion, Jefferson graduates gathered for the unveiling of a statue of Samuel D. Gross, founder of the Alumni Association and world-renowned surgeon of the Nineteenth Century. The statue was first unveiled seventy-three years ago on the lawn outside the National Library of Medicine, Washington, D. C., and was a tribute of the AMA and the Jefferson Alumni Association. The work of A. Stirling Calder, the statue resembles Thomas Eakins depiction of Dr. Gross in the famous painting, "The Gross Clinic," which hangs above the entrance stairway of Jefferson's main building. Arrangements to have the statue removed from Washington to Jefferson Medical College were made by the centennial committee, under the chairmanship of Norman J. Quinn, Jr., M.D.

Paul J. Poinsard, M.D., President

Paul J. Poinsard, M.D., president of the Jefferson Alumni Association, William F. Kellow, M.D., vice-president of Thomas Jefferson University and dean of the medical college, and Peter A. Herbut, M.D., university president, participated in the ceremonies of unveiling.

Dr. Poinsard, who is also chairman of the PMS Commission on Mental Health and Mental Retardation, presented a commemorative silver medal to the orchestra during the intermission of the concert which featured works of Beethoven, Brahms and Rachmaninoff and was played before a full house.

Among the hundreds of Jefferson alumni, their wives and families, were a number of honored guests, including Governor Raymond P. Shafer, Dr. Frederick K. Mitler, commissioner of higher education, and representatives of the British government.

Following the concert at the Philadelphia Academy of Music, alumni and guests enjoyed a reception and dancing at Jefferson Hall.

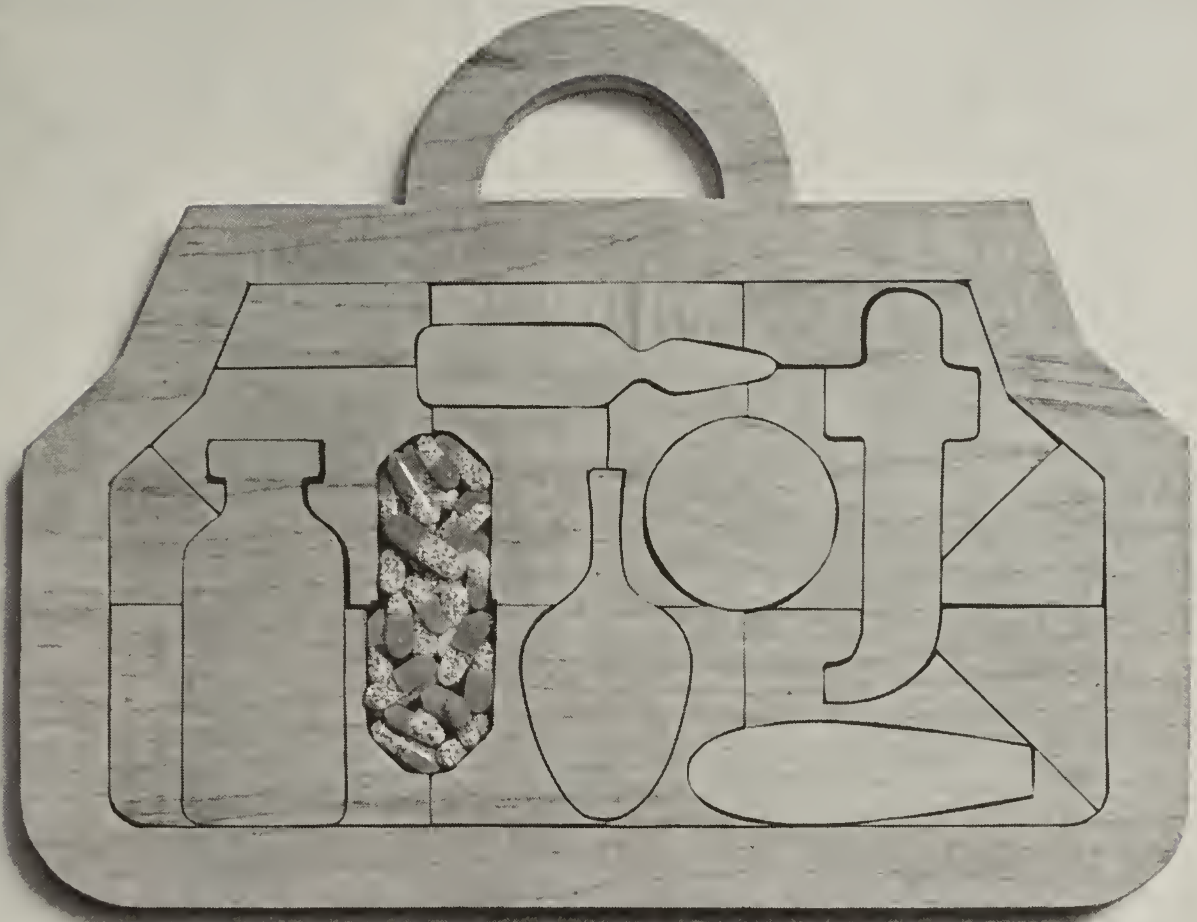
A special forum on home care *held recently by Community Services of Pennsylvania drew the participation of a number of professionals interested in the delivery of Health care. Shown above are George E. Farrar, Jr., M.D., immediate past president of PMS; Jesse Lynn, regional representative, and Miss Sue Jenkins, special assistant to the director, both from the Bureau of Health Insurance, Department of Health, Education, and Welfare; and Malcolm W. Schoenly, director of the Office of Medicare, Pennsylvania Department of Health.*

ACMS Has New Home

The Allegheny County Medical Society has moved its headquarters, after thirty-five years in the Jenkins Building in Pittsburgh to a north side location in Pittsburgh, at 713 Ridge Avenue.

William F. Donaldson, M.D., president of the 105-year-old organization said the space in the new headquarters is double that leased by the society in the Jenkins Building, and added that ample parking space is adjacent.

Search for a new headquarters actually began by membership authorization ten years ago, when another Dr. Donaldson, John S. Donaldson, M.D., was president. Among those who worked on finding a suitable new home through the ensuing years were Robert J. Carroll, M.D., immediate past president, William A. Barrett, M.D., PMS president, George H. Fetterman, M.D., James L. Buchanon, M.D., W. B. Carson, Jr., M.D., Charles L. Schmidt, M.D., and Executive Secretary H. David Moore and Executive Assistant John P. Munns.



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Thorazine®

brand of chlorpromazine HCl

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Available in 30 mg., 75 mg., 150 mg., 200 mg. and 300 mg. strengths.

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Problems Studied at Conference

The fourteenth annual conference of the PMS Women's Auxiliary, centering on the theme, "Active Health Leadership in a Changing Culture," explored the pressing problems of drug abuse and creating understanding between generations and held a business session April 15 and 16 at the Penn Harris Motor Inn, Camp Hill. Speaker at the conference dinner was Ethel J. Apfenfels, Ph.D., professor of anthropology at New York University. Another dinner highlight was the presentation, shown above, of the film, "Marijuana," by Auxiliary President Mrs. John A. Schneider, far left, to PMS President William A. Barrett, M.D., for use by the Society in its drug abuse education program. In the second picture above, Mrs. Axel K. Olsen, left, chairman of the nominating committee, presents the nominee for president-elect, Mrs. Ralph S. Blasiole, Monongahela, to the conference. Further nominations and elections take place at the annual convention in October. Secretary of Health Ellsworth R. Browneller, M.D., participated in the forum on drug abuse, at which the film, "Marijuana" was shown. Present at the forum were residents of Gaudenzia House, Philadelphia, a rehabilitation center for former addicts, and students from area high schools. Auxiliary President-Elect Mrs. Leroy A. Gehris, right, was general chairman of the forum.

Three Regional Plan Groups, Health Planners Meet to Discuss Methods for Closer Cooperation

Closer coordination between Pennsylvania's three Regional Medical Programs and the State Health Department's Office of Comprehensive Health Planning was the theme of a day-long conference held April 17, in Carlisle.

The conference, coordinated by the Susquehanna Valley Regional Medical Program, brought together the directors and staffs of the four programs for the first time in the three years that all four have been in existence in Pennsylvania.

It was held against a backdrop of pending Federal legislation which calls for closer ties between RMP and CHP after the current legislation expires on June 30, 1970.

Originally designed to bridge the gap between research and actual patient care for victims of heart disease, cancer, stroke and related diseases, Regional Medical Programs have been in a constant state of change since their inception in 1965, the year after the Presidential Commission on Heart Disease, Cancer and Stroke made its historic report.

Heading the list of participants was Ellsworth R. Browneller, M.D., state secretary of health and vice-chairman of the SVRMP's Regional Advisory Group. Program directors, in addition to McKenzie, include Henry V. Walkowiak, director of the office of comprehensive health planning; George R. Clammer, M.D., Greater Delaware Valley RMP, and Robert R. Carpenter, M.D., Western Pennsylvania RMP.

After only one year:

Administered to more people than live in Erie and Harrisburg.*

Injectable Garamycin®
brand of gentamicin sulfate injection

*An estimated 208,000 patients have received GARAMYCIN Injectable to date. The combined population of Erie and Harrisburg is 207,000 (Estimated 1969 figures from The New York Times Encyclopedic Almanac 1970.)

See Clinical Considerations section on last page...

Mounting acceptance in the hospital...

Proven clinical effectiveness

Respiratory Infections

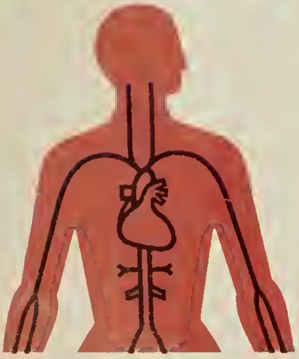
Outstanding results in serious gram-negative respiratory infections[1,2]

GARAMYCIN Injectable may prove successful where other antibiotics have failed.

Urinary Tract Infections

Strikingly effective in selected urinary tract infections[3]

With relatively low intramuscular doses, the promptly attained levels of GARAMYCIN achieved in the urine are considerably higher than the concentrations required for effectiveness against virtually all susceptible gram-negative pathogens. (Appropriate precautions are indicated in patients with impaired renal function; consult Package Insert for full details.)



Septicemia

May be lifesaving[4-6]

Numerous investigators have drawn attention to the value of GARAMYCIN Injectable in the treatment of gram-negative septicemias, often complicated by shock. Many hospital strains of *Serratia* are susceptible.[6]

Wounds and Burns

Response may be dramatic in wounds and burns complicated by sepsis[7]

The established efficacy of GARAMYCIN Injectable against *Pseudomonas*—as well as most other gram-negative pathogens—makes it an especially useful agent in the treatment of infected wounds and burns.

Important Precautionary Note Patients receiving treatment with GARAMYCIN Injectable (gentamicin sulfate injection) should be under close clinical observation because of the toxicity associated with the use of the drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with preexisting renal damage, treated with GARAMYCIN Injectable for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with preexisting renal damage.

This drug should be limited to the treatment of serious infections caused by susceptible gram-negative bacteria, with due regard for relative antibiotic toxicity. (See Clinical Considerations section.)

Mounting evidence in the laboratory...

Over 95% gram-negative pathogens sensitive*

No other antibiotic performed comparably *in vitro* against gram-negative pathogens.
In a nationwide culture audit of antibiotic sensitivity patterns, sensitivity reports from 106 hospitals, geographically representative by census tract and of varying sizes, were analyzed. During the three-month period, ***every*** gram-negative culture slip from ***every*** hospital was surveyed. The total number of cultures involved in the audit was 97,091. The total number of sensitivity determinations was 643,503.

Antibiotics*

Percentage of sensitive strains
Number of strains tested

Pathogens	**Garamycin**	**Kanamycin**	**Cephalothin**	**Cephaloridine**	**Ampicillin**	**Colistimethate**	**Chloramphenicol**	**Tetracycline**
Klebsiella pneumoniae	**99.5%** 962	**84.7%** 992	**86.2%** 995	**76.1%** 67	**32.7%** 1,020	**96.3%** 640	**82.9%** 1,028	**77.1%** 1,026
Aerobacter aerogenes	**95.9%** 2,739	**86.1%** 2,818	**53.5%** 2,985	**58.8%** 1,514	**22.7%** 3,066	**88.6%** 2,603	**85.8%** 3,071	**67.8%** 2,981
Klebsiella aerobacter group	**98.8%** 566	**83.9%** 547	**66.1%** 522	**60.5%** 276	**28.0%** 553	**89.5%** 560	**86.2%** 587	**62.8%** 433
Klebsiella, all others	**92.7%** 2,944	**83.3%** 3,186	**77.4%** 2,976	**67.5%** 627	**13.5%** 2,883	**95.0%** 2,105	**81.6%** 3,212	**70.6%** 3,063
Pseudomonas aeruginosa	**91.6%** 4,528	**29.8%** 4,460	**6.6%** 4,418	**6.6%** 1,279	**6.0%** 4,360	**91.3%** 3,852	**26.9%** 4,608	**26.4%** 4,404
Proteus, indole-positive	**91.8%** 1,031	**85.8%** 1,062	**39.9%** 981	**54.1%** 364	**40.2%** 1,042	**10.3%** 758	**76.1%** 1,096	**42.1%** 1,051
Proteus mirabilis, indole-negative	**94.9%** 3,272	**90.1%** 3,378	**83.1%** 3,290	**77.5%** 975	**78.0%** 3,274	**8.8%** 2,634	**85.9%** 3,469	**26.8%** 3,278
Proteus, unspecified	**96.2%** 1,335	**85.8%** 1,371	**71.7%** 1,434	**70.0%** 647	**64.7%** 1,435	**11.2%** 1,233	**76.0%** 1,421	**22.4%** 1,298
Escherichia coli and all other Escherichias	**96.4%** 12,557	**91.4%** 12,818	**87.8%** 12,686	**88.8%** 4,251	**74.6%** 12,899	**95.4%** 10,623	**94.1%** 13,086	**70.0%** 12,559
Paracolobactrum, all	**93.4%** 303	**88.9%** 325	**62.0%** 305	**74.2%** 62	**43.8%** 340	**80.9%** 215	**87.1%** 350	**72.6%** 340
Coliform bacteria	**99.0%** 593	**91.2%** 649	**81.5%** 637	**66.7%** 21	**52.7%** 624	**95.6%** 607	**91.6%** 678	**76.1%** 637
Totals	**95.1%** 30,830	**80.5%** 31,606	**65.3%** 31,229	**68.1%** 10,083	**50.3%** 31,496	**75.8%** 25,829	**79.7%** 32,606	**56.5%** 31,070
Gram-positive (included for consistency with Package insert, not an approved indication)								
Staph—S. aureus, coagulase-positive	**97.4%** 1,548	**88.8%** 1,458	**97.7%** 2,050	**98.7%** 636	**61.1%** 1,559	**20.4%** 628	**94.4%** 2,123	**83.7%** 1,966
Staph—S. aureus, unspecified	**99.3%** 993	**92.8%** 902	**98.1%** 1,289	**95.3%** 213	**45.8%** 1,153	**29.3%** 116	**96.4%** 1,427	**82.3%** 1,360

*Adapted from a three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).[8]
Antibiotics with significant gram-negative spectra are included. Organisms are listed as reported by laboratory.
Sensitivity testing was done by the disc method, a generally reliable test in the hospital setting. It should be noted, however, that the results with GARAMYCIN were somewhat higher than the results reported where the tube dilution technique was used. (See Clinical Considerations section which follows.) The concentration of the GARAMYCIN disc was 10 mcg.
Whereas standard testing methods were used by all hospitals, it is acknowledged that in a survey of this kind considerations such as differences in methodology are possible sources of error. The comparative percentage-sensitivity results derived from a survey of this kind are, therefore, not absolute. One should keep in mind also that the proper selection of an antibiotic is based not only on susceptibility testing but on relative toxicity and other clinical considerations as well.
It is felt, nonetheless, that the broad scope of the survey and the extreme care in data collection and tabulation permit a conclusion that the results are *generally* representative of current nationwide antibiotic sensitivity patterns.

Injectable
Garamycin®
brand of
gentamicin sulfate
injection

See Clinical Considerations section on last page...

Injectable Garamycin®
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# gentamicin sulfate injection

ADULT DOSAGE GUIDELINES

See definitive prescribing information in Package Insert.

Patients with Normal Renal Function

Total Daily Dose (administered in two, three, or four divided doses)			
	Less Severe	**Resistant/ Moderately Severe**	**Serious/ Life-Threatening**
Urinary Tract Infections (due to susceptible strains of gram-negative bacteria)†	0.8-1.2 mg./kg. for 7-10 days	Larger doses or additional antibacterial therapy should be considered in severe urinary tract infections or in resistant cases involving the renal parenchyma or anatomic anomaly.	up to 5 **mg./kg.**
Other Infections including bacteremia, infected surgical wounds, severe soft tissue infections, and respiratory tract infections (due to susceptible strains of gram-negative bacteria)	3 mg./kg. for 7-10 days		

†Alkalinization of the urine may be a useful therapeutic adjunct.

Patients with Impaired Renal Function

To minimize the risk of ototoxicity in patients with impaired kidney function, only the first dose should be that normally recommended. Each subsequent dose should be half or less of that recommended for patients with normal renal function, depending upon the degree of renal impairment.

In patients with renal failure who are undergoing 14-hour hemodialysis twice weekly, administration of 1 mg./kg. GARAMYCIN Injectable at the end of each dialysis period has been suggested.

Clinical Considerations

Indications: GARAMYCIN Injectable is clinically effective in infections due to susceptible strains of gram-negative bacteria, including *Pseudomonas aeruginosa*, and species of indole-positive and indole-negative *Proteus*, *Escherichia coli*, and *Klebsiella-Aerobacter*. Bacteriologic studies should be conducted to identify the causative organism and to determine its sensitivity to gentamicin sulfate. Sensitivity discs of the drug are available for this purpose. If the susceptibility tests indicate that the causative organism is resistant to gentamicin sulfate, other appropriate antibiotic therapy should be instituted.

IN VITRO INHIBITION OF CLINICALLY IMPORTANT BACTERIA BY GENTAMICIN SULFATE (TUBE DILUTION STUDIES)

BACTERIA	No. of Strains Tested	No. of Strains (%) Inhibited by: 4 mcg./cc. or less		8 mcg./cc. or less*		No. of *In Vitro* Studies
Staphylococcus aureus	1,210	1,200	(99%)	1,206	(99%)	11
Pseudomonas aeruginosa	885	771	(87%)	828	(93%)	16
Escherichia coli	836	736	(88%)	779	(93%)	11
Indole-positive and indole-negative *Proteus* species	477	210	(14%)	358	(75%)	12
Klebsiella-Aerobacter species	292	205	(70%)	231	(79%)	10

*Number of strains (%) of gram-negative bacteria inhibited by 10 mcg./cc. or less are as follows: *Pseudomonas aeruginosa*, 828 (93%); *Escherichia coli*, 792 (95%); *Proteus* species, 393 (82%); *Klebsiella-Aerobacter* species, 284 (97%). From same studies as above.
Source: Package Insert

This drug should be limited to the treatment of serious infections caused by gram-negative bacteria, particularly *Pseudomonas aeruginosa*, *Proteus* and other susceptible organisms, with due regard for relative antibiotic toxicity. Therefore, the drug should be considered for use against gram-negative: 1. Bacteremia; 2. Infected surgical wounds; 3. Severe soft tissue infections, including burns complicated by sepsis; 4. Respiratory tract infections; and 5. Selected cases of urinary tract infection.

Contraindications: GARAMYCIN Injectable is contraindicated in individuals with a history of hypersensitivity or toxic reactions to gentamicin.

Schering

Warnings: Patients receiving treatment with GARAMYCIN should be under close clinical observation because of the toxicity associated with the use of this drug. Ototoxicity, vestibular and auditory, can occur in patients, primarily those with pre-existing renal damage, treated with GARAMYCIN Injectable, usually for longer periods or with higher doses than recommended.

GARAMYCIN Injectable is potentially nephrotoxic, and this should be kept in mind when it is used in patients with pre-existing renal impairment. Kidney function diminished by infection of the upper urinary tract may, however, improve during effective treatment with GARAMYCIN Injectable.

Concurrent administration of potentially ototoxic drugs such as streptomycin and kanamycin or of potentially nephrotoxic drugs such as polymyxin, colistin, and kanamycin with gentamicin sulfate has not been shown to afford any clinical advantages and, moreover may result in additive toxicity. Monitoring of vestibular, cochlear, and renal function will provide guidance for therapy in such cases.

Precautions: In patients with impaired renal function in whom serious infection develops, serum concentrations of the drug may rise, with consequently increased risk of ototoxicity. In these patients or in those in whom recommended dosage or duration of therapy must be exceeded as a life-saving measure, routine studies of kidney function should be performed when possible. These may be supplemented by evaluation of the vestibular and auditory function and measurement of serum concentration of the drug when feasible. Serum concentrations of gentamicin should be maintained below the range of 10-12 mcg./ml. to reduce risk of ototoxicity.

Ordinarily, treatment should not be given for more than 7 to 10 days or be repeated unless required for serious infection not responsive to other agents.

As with other antibiotics, treatment with GARAMYCIN Injectable may occasionally result in overgrowth of nonsensitive organisms. If superinfection occurs, appropriate therapy is indicated.

Safety for use in pregnancy or the potential for fetal ototoxicity or nephrotoxicity have not been established. Studies in pregnant animals have not revealed teratogenic or ototoxic effects in the fetus. GARAMYCIN Injectable should not be used in pregnant patients or in women of childbearing age unless its use is deemed advisable by the physician.

Adverse Reactions: The overall incidence of ototoxicity considered related to treatment with GARAMYCIN Injectable was 2.8 per cent (16 of 565 patients). Contributory factors (two or more factors were relevant to most patients) were as follows: 10 had azotemia, 10 received a total of 1 gram or more of the drug, 7 had recently received other potentially ototoxic antibiotics (streptomycin or kanamycin), and 5 were over 60 years of age. Six also had decreased high-tone hearing acuity, which returned to or toward normal in the 4 patients retested.

Analysis of BUN data indicated that 4 (2%) of 172 patients showed increases in BUN that were probably related to treatment with GARAMYCIN Injectable. Of 20 increases probably or possibly related to treatment, 7 were reversible, 9 occurred in terminal patients, and 4 had no follow-up.

Other adverse reactions associated with treatment were one instance each of urticaria, decreased hematocrit, and reversible depression of granulocytes with normal bone marrow. Other rarely reported and possibly treatment-related adverse reactions were anemia, increased reticulocyte count, rash, purpura, drug fever, hypotension, convulsions, twitching, salivation, nausea, vomiting, increased transaminase activity (SGOT or SGPT), increased serum bilirubin, decreased serum calcium, and joint pain.

Packaging: GARAMYCIN Injectable, 40 mg./cc., 2-cc. multiple-dose vials, for intramuscular administration.

References: (1) Brayton, R. G., and Louria, D. B.: Gentamicin in gram-negative urinary and pulmonary infections, Arch. Int. Med. *114*:205, 1964.* (2) Louria, D. B.; Young, L.; Armstrong, D., and Smith, J. K.: Gentamicin in the treatment of pulmonary infections, J. Infect. Dis. *119*:483, 1969. (3) Cox, C. E.: Gentamicin, a new aminoglycoside antibiotic: Clinical and laboratory studies in urinary tract infections, J. Infect. Dis. *119*:486, 1969. (4) Groll, E.: Clinical experience with gentamicin, data from 12 German clinics, in Gentamicin: First International Symposium, Paris, January 1967, Lucerne, Essex Chemie AG, pp. 121-128.* (5) Jackson, G. G.: Laboratory and clinical investigation of gentamicin, *ibid.*, pp. 62-74. (6) Medeiros, A. E.: Discussion, J. Infect. Dis. *119*:533, 1969. (7) Polk, H.: Discussion, J. Infect. Dis. *119*:529, 1969. (8) Three-month, nationwide hospital audit by R. A. Gosselin and Co., Inc., Dedham, Massachusetts (mid-May to mid-August, 1969).

*Dosage in this investigational study was less than now recommended in Package Insert.

For more complete prescribing details, consult package insert or Physicians' Desk Reference. Schering literature is also available from your Schering Representative or Medical Services Department, Schering Corporation, Union, New Jersey 07083.

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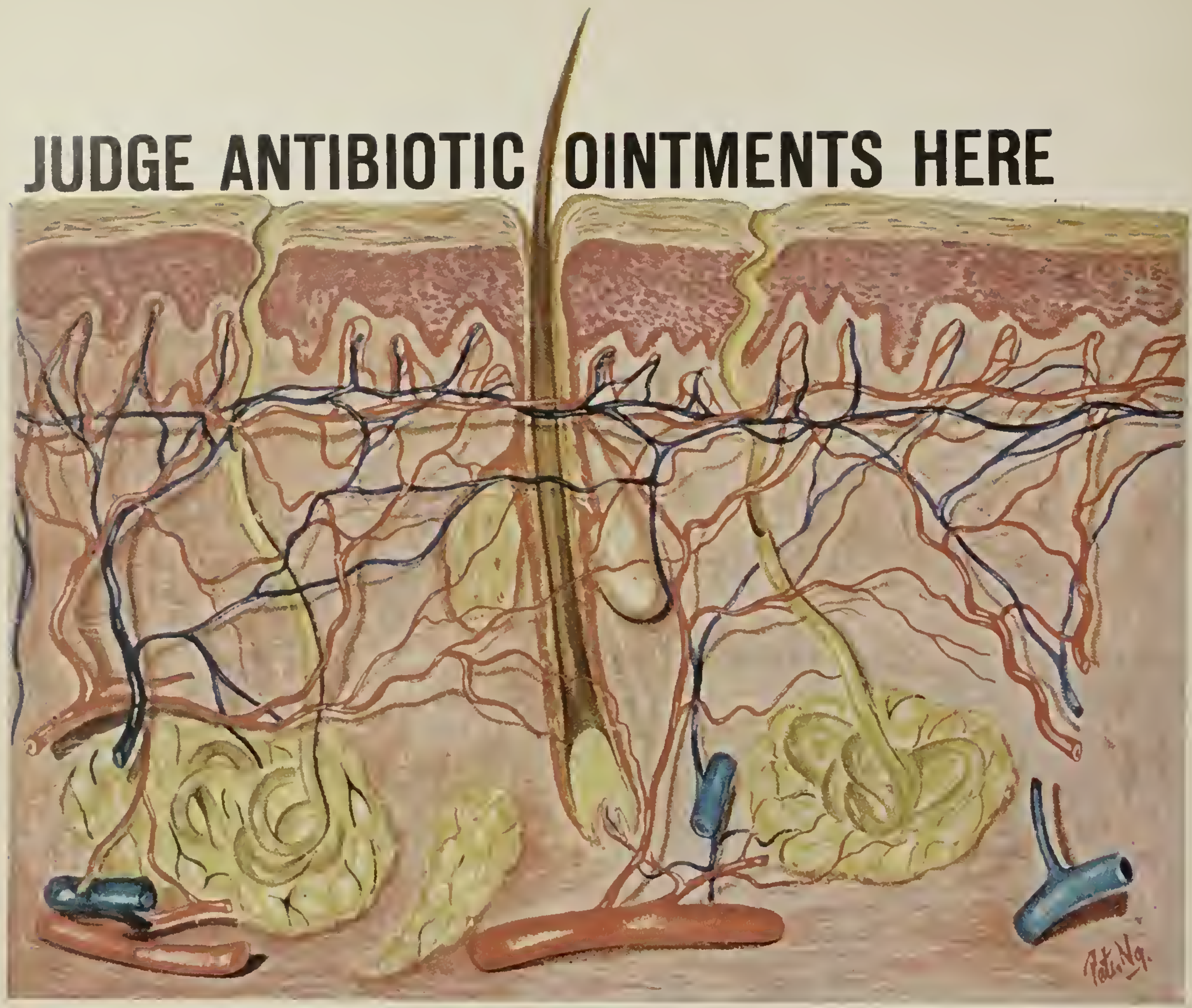

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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

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John H. Moyer Elected U. S. P. Head

John H. Moyer, M.D., Philadelphia, was elected president of the U. S. Pharmacopeial Convention, Inc., at the decennial session of the Convention. He succeeds Arthur C. DeGraff, M.D., who as immediate past-president becomes a member of the newly constituted Board of Trustees. Elected vice-president of the Convention was George E. Farrar, Jr., M.D., Philadelphia, past president of the Pennsylvania Medical Society, who had served on the U.S.P. Committee of Revision during the 1950-1960 decade.

At the same time, the Convention delegates elected six nominees to the U.S.P. Board of Trustees, including: Paul L. McLain, M.D., Pittsburgh, and Walter Modell, M.D., representing the medical sciences; Paul Parker, M.S., and Linwood F. Tice, D.Sc., representing the pharmaceutical sciences; and Leslie L. Eisenbrandt, Ph.D., and Fred Mahaffey, B.S., as members at large. The officers of the Convention and the immediate past-president serve as ex-officio members of the board, bringing its membership to ten. The new Board met immediately, and elected Dr. McLain, who had served as board chairman since 1968, to his first full term as chairman. Executive Director William M. Heller was elected secretary of the Board of Trustees, in which capacity he serves as a non-voting member and automatically is secretary of the U.S.P. Convention.

Dr. Moyer

Specific projects to be undertaken as part of the expanding U.S.P. services will be decided by the Board of Trustees at a meeting to be held in June. Board Chairman McLain assured the convention delegates that the U.S.P. will remain a select list of drugs, with tests and standards, and outlined plans for a companion volume, or other suitable means of publication, which would give more complete information about U.S.P. drugs, including the rationale behind their selection. This project is expected to provide the basis for development of ancillary drug-information services.

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PENNSYLVANIA
MEDICINE

close-up/MD's

Leo Madow, M.D., Woman's Medical College of Pennsylvania professor and chairman of the department of psychiatry and neurology, has been installed as president of the Philadelphia Psychiatric Society.

K. Gopal Nair, M.D., and **Vansant N. Udhoji, M.D.,** both of Philadelphia, recently were granted fellowships in the American College of Cardiology. From the western part of the state **David L. Chamovitz, M.D.,** Aliquippa; **George J. D'Angelo, M.D.,** and **William L. Underhill, M.D.,** both of Erie, were made fellows.

Juergan Homan, M.D., has been named clinical director, and **Marvin I. Shapiro, M.D.,** director of community services for the Pittsburgh Child Guidance Center, according to an announcement made by **Meyer Sonis, M.D.,** executive director.

Charles L. Leedham, M.D., director, bureau of educational activities, Pennsylvania Department of Health has been named visiting professor of preventive medicine at Thomas Jefferson University Medical College, Philadelphia.

Harold E. Coder, M.D., New Cumberland, recently was honored at a banquet on his retirement as director of the division of chronic respiratory diseases of the Pennsylvania Department of Public Health. His retirement marked the end of a career in public service spanning forty years, the first twenty-six years of which were spent in the U.S. Army Medical Corps.

Jonathon E. Rhoads, M.D., president of the Philadelphia County Medical Society and immediate past president of the board of regents of the American College of Surgeons, has taken office as president of the American Cancer Society.

John Helwig, Jr., M.D., Philadelphia, American College of Cardiology governor for Pennsylvania, has announced the granting of fellowships to the following Pennsylvanians: Drs. **William I. Heine,** Philadelphia; **Bruce R. Marger,** Norristown; **Benjamin C. Musser,** Harrisburg; **Charles E. Myers,** Kingston; **John J. Sayen,** Philadelphia; **Louis A. Soloff,** Philadelphia; **Leslie Weiner,** Philadelphia and **E. Berry Hey, Jr.,** West Reading.

DR. HORTON

Park M. Horton, M.D., chairman of the PMS Board of Trustees and Councilors was honored recently by a double testimonial planned by the people of New Milford, where he has practiced for thirty-seven years, and under the sponsorship of the Rotary Club, of which he is a charter member.

The Rotary Club dinner, a real surprise to Dr. Horton, drew a capacity crowd of 400, so a reception in his honor was scheduled for the following afternoon, and it was attended by another 400.

Dr. Horton was lauded in the official "Tribute" as "a fine doctor, humanitarian, counselor, civic leader, church leader, benefactor; a man active in county, state and national affairs, but most of all a friend to each of us . . . If we had our choice Park M. Horton would be our unanimous selection as our doctor and citizen of our community."

William A. Limberger, M.D., president-elect of the Pennsylvania Medical Society, represented the doctors of the state in paying tribute to Dr. Horton. James Grace, M.D., president of the Susquehanna County Medical Society, also spoke.

A graduate of Jefferson Medical College, '32, Dr. Horton has been active in numerous capacities in the State Society, and is a member of the World Medical Association and the AMA House of Delegates.

Francis C. Wood, M.D., Philadelphia, was elevated to the position of master in the American College of Physicians at its fifty-first annual session in Philadelphia in April.

Emory A. Rittenhouse, M.D., McKeesport, executive director of the American Diopter-Decibel Society, arranged a seminar in otolaryngology and ophthalmology in March at the invitation of the Ministry of Health, Netherland Antilles. Physicians from six states and Canada were on the faculty, including **Charles McConnel, M.D.,** Beaver; **Bernard Braverman, M.D.,** McKeesport; **Kenneth Hinderer, M.D.,** and **Joseph Hampsey, M.D.,** of Pittsburgh.

Rena Heilman Lindsay, M.D., Pittsburgh, was elected to the International Registry of Who's Who, Geneva, Switzerland, last fall.

George I. Blumstein, M.D., F.A.C.P., clinical professor of medicine at Temple University Helath Sciences Center, Philadelphia, was installed as president of the College of Physicians of Philadelphia for 1970. He succeeds **Francis C. Wood, M.D.,** emeritus professor of medicine at the University of Pennsylvania College of Medicine, who assumed the office of honorary librarian of the college.

Joseph J. Baker, M.D., Providence, R. I., has been named director of the psychiatry, neurology and psychology service of the Veterans Administration, Donald E. Johnson, veterans affairs administrator, has announced. Dr. Baker is a native of Pennsylvania and received his medical degree from Temple University. He spent seven years in private practice in Gettysburg following his psychiatric residency and military service, prior to entering public service.

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WELCOME, NEW MEMBERS!

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Paul W. Pifer, M.D., Gettysburg Motor Court, Gettysburg 17325.

ARMSTRONG COUNTY:

Peter J. Keim, M.D., 648 Vance Ave., Lower Burrell 15068.

BEAVER COUNTY:

Richard L. Moffet, M.D., 122 Gilliland Ave., Beaver Falls 15010.
Ahmed Y. Al-Mallah, M.D., 1935 Brodhead Rd., Aliquippa 15001.

BUCKS COUNTY:

John F. Glodek, M.D., 20 Lakeside Dr., Levittown 19053.
John P. Hougaard, M.D., 530 S. Olds St., Fairless Hills 19030.
William F. Warrender, M.D., 781 Second St. Pike, Southampton 18966.
Francis B. Boland, Jr., M.D., 573 N. Main St., Doylestown 18901.

BUTLER COUNTY:

Irvin H. Trincher, M.D., Veterans Administration Hospital, Butler 16001.

CAMBRIA COUNTY:

Gordon A. Gress, M.D., 1111 Franklin St., Johnstown 15905.

CRAWFORD COUNTY:

Robert C. Challener, M.D., 580 Chestnut St., Meadville 16335.
William A. Wulfman, M.D., Spencer Hospital, Meadville 16335.

CUMBERLAND COUNTY:

Jon D. Cooksey, M.D., 127 Parker St., Carlisle 17013.

DAUPHIN COUNTY:

Rudolfo Rodriguez, M.D., Harrisburg State Hospital, Harrisburg 17105.
Frank C. Snope, M.D., 500 University Dr., Hershey 17033.
Jose A. Garcia, M.D., 30 Greenbrier Lane, Dillsburg 17019.

ERIE COUNTY:

Chul Nam Lee, M.D., 4 E. Second St., Erie 16512.

Frank J. Theuerkauf, Jr., M.D., 1611 Peach St., Erie 16501.

FRANKLIN COUNTY:

Florencio C. Villa, M.D., 328 N. Second St., McConnellsburg 17233.

HUNTINGDON COUNTY:

Marilyn H. Stephens, M.D., 741 Washington St., Huntingdon 16652.

LACKAWANNA COUNTY:

Samuel R. Todaro, M.D., 822-24 Connel Bldg., Scranton 18503.

LEHIGH COUNTY:

Ramon J. Deeb, M.D., 421 Chew St., Allentown 18102.

Peter H. Goldman, M.D., Box 75, 354th USAF Disp., APO, San Francisco, Calif. 96264.

James E. Kintzel, M.D., 3351 Lindberg Ave., Allentown 18103.

Claude D. Magnant, M.D., R.F.D. 1, Parkland Farms, Wescosville 18090.

John J. Mecca, M.D., 519 N. Seventh St., Allentown 18102.

Walter J. Okunski, M.D., 944 Stewart Pl., Franklin Square, Long Island, N. Y. 11010.

Renault Saint-Amand, M.D., 825 Elizabeth St., Allentown 18103.

MONROE COUNTY:

Charles F. Smith, M.D., 124 Analomink St., East Stroudsburg 18301.

MONTGOMERY COUNTY:

Paul R. Sweterlitsch, M.D., 1137 Old York Rd., Abington 19001.

E. J. Yanity, M.D., 247 Meetinghouse Rd., Jenkintown 19046.

MONTOUR COUNTY:

Joseph J. Mowad, M.D., Geisinger Medical Center, Danville 17821.

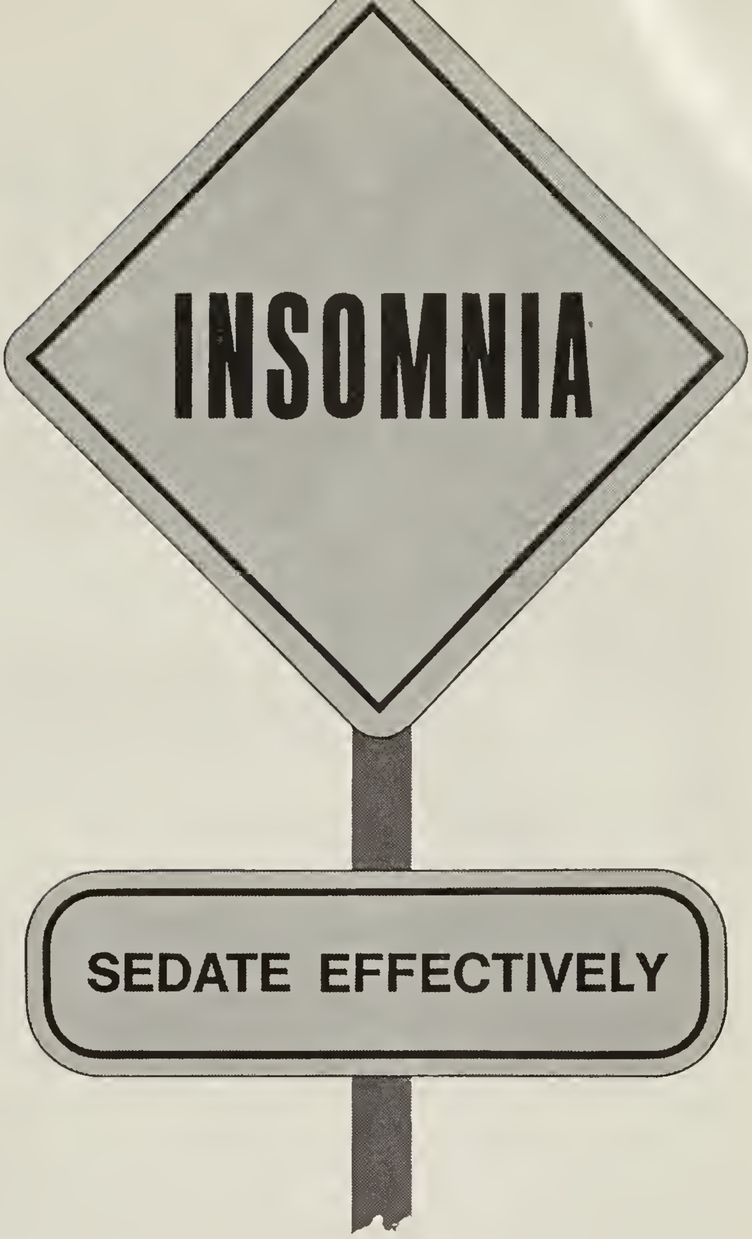
Glenn N. Burgess, M.D., R.D. 4, Danville 17821.

NORTHAMPTON COUNTY:

Duane E. Stackhouse, M.D., 8 Robin Ct., R.D. 4, Bethlehem 18015.

SCHUYLKILL COUNTY:

Ruperto F. Colmenares, M.D., Good Samaritan Hospital, Pottsville 17901.



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References: 1. **Monteseno, P., and Evangelista, I.** Methyltestosterone-thyroid treatment of sexual impotence. Clin Med 12·69, 1966. 2. **Dublin, M. F.** Treatment of impotence with methyltestosterone-thyroid compound. West Med 5:67, 1964. 3. **Titeff, A. S.** Methyltestosterone-thyroid in treating impotence. Gen Prac 25·6, 1962 4. **Hellman, L., Bradlow, H. L., Zumoff, B., Fukushima, D. K., and Gallagher, T. F.** Thyroid-androgen interrelations and the hypocholesteremic effect of androsterone. J Clin Endocr 19:936, 1959. 5. **Farris, E. J., and Colton, S. W.** Effects of L-thyroxine and liothyronine on spermatogenesis. J Urol 79·863, 1958. 6. **Osol, A., and Farrar, G. E.** United States Dispensatory (ed. 25). Lippincott, Philadelphia, 1955, p. 1432. 7. **Warshub, L. P.** Sexual Impotence in the Male. Thomas, Springfield, Ill., 1959, pp. 79-99.

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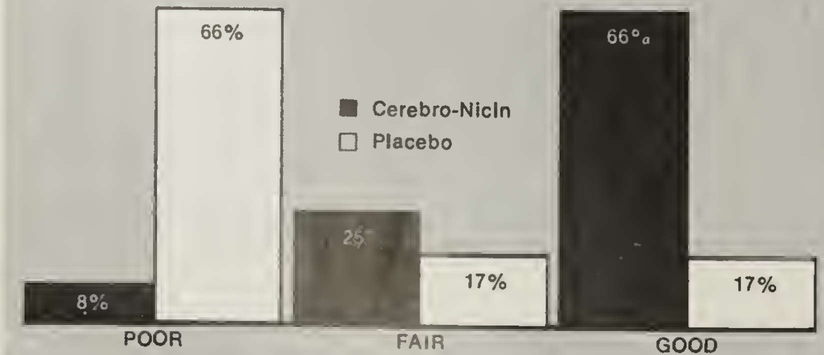

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PENNSYLVANIA
MEDICINE editorials

A Salute to Jefferson Alumni

Nearly 7,000 doctors, celebrated a birthday last month. They are members of the Alumni Association of Jefferson Medical College of Thomas Jefferson University in Philadelphia. They celebrated the one hundredth birthday of the largest medical school alumni association in the western hemisphere.

In a manner typical of physicians, and traditional at Jefferson, the better part of two days was devoted to the business of continuing medical education. The medical college was established in 1824 and the first class was graduated in 1826. The business of educating doctors never was limited at Jefferson, which today provides continuing medical education courses throughout Pennsylvania for physicians in all disciplines.

From the beginning Jefferson served the community. It has been noted elsewhere that Jefferson graduated more doctors who treated presidents of the United States than any other medical school. It has been noted also that Jefferson has most distinguished physicians among its alumni, including such men as Samuel D. Gross, who was first president of the Alumni Association, and whose name is inscribed in mosaic at the Library of Congress for his writings. He is recognized internationally as the greatest surgeon of the Nineteenth Century. Along with Gross are Washington L. Atlee, pioneer and authority on abdominal surgery; Marion Sims, the father of gynecology; John H. Gibbon, Jr., gifted surgeon and professor at Jefferson, who perfected the heart-lung machine and performed the first successful open-heart surgery with a dry field.

The names of the famous are recorded in medical history and are too numerous to mention here. But it is important that we recognize particularly the estimated 3,000 Jefferson alumni who practice in Pennsylvania – in her great cities and rural counties. In this age of crises in the delivery of medical care, what would be the position of the Commonwealth without these Jefferson alumni who live and work among us?

These are doctors whose lives and careers have been molded in the spirit of the school which sent them forth to practice the healing arts – a school which in its first thirty years of existence offered ten scholarships per year to needy students – a school which from the beginning operated a free clinic for Philadelphia's poor – a school which is deeply involved in the community today through its Children and Youth Program, the Jefferson unit at Philadelphia General Hospital and at Philadelphia State Hospital where Jefferson is responsible for the care of 600 patients, and through its teaching hospital.

The ranks of Jefferson graduates have no choice except to grow. The freshmen classes of the past two years each have number 192. The school has made a commitment to increase enrollment by 10 per cent in 1971. To the credit of the administration, the school is equipped to handle the increase. Not the least among the sources of revenue to finance new construction is the generous alumni, who, when they returned for this centennial reunion, had their activities centered at Jefferson Hall, a thing of beauty and practicality, and the result in large part to the generosity of the alumni, who, since the Annual Giving Fund was started in 1948, have raised more than three million dollars for their alma mater.

The Pennsylvania Medical Society and *Pennsylvania Medicine* join the many who have saluted the Jefferson Alumni Association in this centennial year, knowing well that they are not merely among us, but are a vital part of us. Officers, council, committee and commission chairmen, contributing editors and authors for PMS and its official publication have come from Jefferson. So when we ask, "Where would the Commonwealth be without Jefferson," we can ask as well, "What would the Pennsylvania Medical Society do without you?"

We salute you, and we thank you.

MLU

A Kind Word For The Doctor

Secretary of Public Welfare Stanley A. Miller, in a tribute to ghetto doctors, issued the following statement:

"The ghetto doctor is a very special kind of physician. Most doctors spend a portion of their time caring for poor people. But there is one kind of doctor who spends all of his time taking care of poor people. This doctor works every day in the ghettos, the slums, the inner city, the depressed community.

"His medical office is most often located in a neighborhood where most of the residents live in poverty and many receive welfare payments — neighborhoods where the streets are not always very clean, where crime rates are high, where many homes are boarded up, and where problems of street gangs and drug addiction plague the average resident.

"He is a very special kind of doctor with the courage, the compassion and the moral fortitude to work where he is critically needed.

"The office of the ghetto doctor is often the first step a poor patient takes into the complex health care system. These doctors serve in the front lines of medical care delivery. They are essential to the total health system.

"Why are they so busy? Very simple, they are scarce."

Without minimizing the very special humanitarianism and the unusual contributions of the "ghetto doctors" praised by Secretary Miller, we would like to note that a physician does not have to have an office in a depressed area to practice the charity on which our medical ethic has been constructed.

A comparable issue was recently an item for discussion by the Pennsylvania Medical Society. A special award was proposed to be given to the civilian physicians who have rendered so much service to the people of Vietnam. In the discussion the Trustees and Counselors of the medical society acknowledged unanimously and at once that such recognition was fitting and well deserved. The award was, however, never authorized because of the difficulty which the Board felt in declaring publicly that this special group of physicians was singular in the light of the many others who are publicly or silently making similar sacrifices and similar contributions.

Without doubt, many doctors do make such sacrifices. But less well recognized are the contributions of the *average* doctor. They have been less and less recognized in recent years when physicians have become targets for public attack.

Doctors are as variable as all men and they make determinations such as where to locate their offices on grounds which are complex and difficult to explain. But most of us, as Secretary Miller says, do not choose to live in problem areas.

Most of us, however, still live by the ancient rules of our profession and although the compensation for our labors may be higher than that of the ghetto doctors cited in the news release, we are still doing our best to keep our ancient oath and to serve our fellowman, whether or not he is able to pay our fee.

We have here another illustration of today's physician's dilemma. We want to move into modern times and to change what must be changed to keep abreast of these times. We want no ghetto and we subscribe to the principles which promise equality of medical care to all.

But the millenium is long in arriving and we must keep alive and flourishing our ethics, our humanitarianism and our charity. Thus we join the ghetto doctor to care for all our fellow citizens. We see here another instance wherein we must change with the times but must preserve what should not change.

CBL

Thoughts on Congressional Testimony

The thousands of pages of the Congressional Record do not constitute light vacation reading for anyone, and yet here is the single most comprehensive source for information, for the conflicting views of experts and for the political and philosophical opinions that somehow become consolidated into the projects, the programs, and the statutes that govern our daily lives. To add one's personal convictions to the heap may be slightly more difficult than to present the policy positions of a major organization, but the legislative bodies of our government still operate in remarkably democratic fashion, providing a forum for the voice of the people.

My experience in speaking for the American Medical Association led me to feel that, in testifying before legislators, we are being afforded an opportunity to persuade to our way of thinking, men and women who truly want to arrive at the best decisions.

One encounters the occasional heckler. "Doctor, what will this new plan of yours do to eliminate the greed and avarice of the medical profession which has been such a problem?" "Doctor, why does the AMA, which has always opposed compulsory health insurance, now come up with a compulsory plan of its own?" These are really the only two questions, based on false premises, that I can recall having thrown at me, and they may simply have been a test of my equanimity. One no doubt needs to expect such things — to anticipate them if possible, but unless one is goaded into losing one's "cool," the opportunity to present to our lawmakers our own ideas of what is best is a stimulating experience. It is a bit more theatrical than the simpler expedient of taking pen in hand and writing to congressmen and senators, but this latter course should never be forgotten. Legislators are anxious to do a lot of speech-making, writing and advertising to influence our thinking when it comes time for re-election. We should not be averse to a little effort on our own part when we wish them to pay attention to us.

Russell B. Roth, M.D.
Speaker of the AMA House of Delegates
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PENNSYLVANIA MEDICINE original papers

Cardiology In The 1970's

ALBERT N. BREST, M.D.
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The last decade witnessed the development, and wide clinical acceptance, of prosthetic valve replacement, intensive cardiac care, coronary arteriography, pace-maker implantation, and electrical cardioversion. In addition, beta adrenergic blocking drugs, enzyme inhibiting antihypertensive agents, potent antilipidemic drugs, and other important pharmacologic advances were introduced. New clinical syndromes such as primary aldosteronism and idiopathic hypertrophic subaortic stenosis were identified and clearly delineated. Acceptance was gained for such plebeian modalities as exercise in rehabilitation of the patient with coronary heart disease. And, finally, toward the end of the sixties cardiac homotransplantation became a clinical reality. Many other less dramatic advances were also introduced.

It is impossible to predict the full scope of cardiology in the new decade. However, it seems inevitable that major strides will be made in the development of mechanical hearts and cardiac transplantation, computerization of diagnostic facilities, and aggressive coronary care. This article will cite some of the apparent directions these advances will take.

Computers in Cardiology

Cardiology is fortunate to have so many objective diagnostic methods available to aid in the clinical evaluation of patients, i.e., electrocardiography, phonocardiography, echocardiography, cardiac catheterization, and apexcardiography, among others. However, these analyses are time-consuming, and the repetitious detailed work is tiring. As the demand for these services increases, the need for rapid and reliable methods for analyzing display data has become increasingly apparent. It is especially important to relieve physicians of routine aspects associated with interpretation. The latter can be accomplished only by the use of computerized systems.

Computer services allow the physician more patient time, expansion of routine screening procedures, and provide diagnostic tests at a reduced cost. The ultimate effect of computerized services is to permit the physician to examine more information more intensively and with a greater degree of uniformity.

Present automated systems record electrocardiographic data on magnetic tape which is then sent by mail or telephone to a data processing unit. The computer results are then returned by telephone or teletype to the originating station (which could be the home, the clinic, or the hospital).

Ultimately, each community will have one or more computer stations which will provide automatic analyses of electrocardiograms, phonocardiograms, echocardiograms, and other "electromedical" signals taken in participating hospitals, clinics, and offices of participating physicians. Improvement in computer services will result in programs designed for both diagnosis and treatment and will guide the management of arrhythmias, cardiogenic shock, and other cardiac emergencies in the hospitalized patient. Computer services will make practical large scale screening in schools and in factories. The penultimate will not be achieved in the 1970s, but the start which has been made will be substantially broadened.

Aggressive Coronary Care

The advent of the coronary care unit (CCU) has added a new dimension in the management of acute emergencies associated with myocardial infarction. Such emergencies are being treated much more efficiently, and the overall morbidity and mortality associated with myocardial infarction has been reduced substantially. With this intensive care, mortality rates have decreased at least 30 per cent from the rate expected under ordinary hospital circumstances. Most of the improvement in hospital mortality, among patients with acute myocardial infarction managed in CCUs, has been achieved via improved understanding and treatment of arrhythmias associated with acute infarction. The management of such arrhythmias undoubtedly will advance, but if significant further reduction in mortality is to be gained we must improve prehospital coronary care, coronary care *after* transfer from the CCU, and management of power failure (pump failure) associated with acute myocardial infarction.

Perhaps the most urgent requirement is to improve prehospital coronary care. Pantridge first emphasized that intensive prehospital care, using specially equipped ambulances and trained staffs, could reduce substantially mortality rates associated with acute myocardial infarction. The Russians have accepted the challenge of this concept, and they too have organized prehospital coronary care teams. Currently, in the United States, systems for prehospital coronary care are being widely studied.

Although the majority of hospital mortality associated with myocardial infarction occurs during the first several days of hospital admission, it is equally noteworthy that 25 to 35 per cent of total hospital mortality occurs *after* transfer from coronary care units. It is inevitable that post-CCU coronary care will also change. Undoubtedly there will be an increasing number of *subacute* cardiac care units where the patient will have their rhythm (and other hemodynamic variables) monitored by telemetry and other noninvasive methods.

Among those patients who succumb currently in the hospital to acute myocardial infarction, despite intensive coronary care, the majority die because of power failure of the heart. Current methods for managing power failure of the heart are grossly inadequate. Presumably, the development of effective mechanical cardiocirculatory assists, and perhaps early and aggressive surgical management of the occluded coronary vessel (endarterectomy, aorto-coronary bypass) and the infarcted myocardium (infarctectomy) will further reduce mortality of these persons.

Cardiac Transplantation

The most dramatic cardiologic event of the 1960s was the successful transplantation of the human heart, performed in December, 1967 (6). Probably no other single event in all of medicine has so captured the interest and imagination of both the lay and medical public. It appeared to some that a therapeutic panacea had been achieved. Now, a little more than two years later, a broadened perspective makes it apparent that, instead of a panacea, only a start has been made in this exciting venture.

Although human homotransplantation is possible and long term survival can be expected, further work to improve control of the rejection reactions, more precise tissue typing, and the development of circulatory assists in the pre and post operative management are the goals that hopefully will be achieved in the 1970s.

The Artificial Heart

The development of an intracorporeal pump, to replace a malfunctioning heart, would seem to be, at first reflection, a relatively simple assignment. However, after almost two decades of intensive research, this goal remains elusive (8). Nonetheless, now for the first time, a coordinated effort is underway. The Artificial Heart Program of the National Heart and Lung Institute has, in fact, undertaken the development of a variety of therapeutically effective, safe, and reliable cardiac assist and total replacement systems (9). The program recognizes the needs for a family of devices designed to meet the varying needs of different classes of heart disease patients.

The specific objectives of the Artificial Heart Program include the following: 1) The development of *emergency assist systems* and techniques for use outside, as well as within, the hospital for the emergency treatment of cardiac arrhythmias and cardiac shock. 2) The development of *temporary cardiac assist systems,* both implanted and external. These would be directed at the short-term treatment of serious cardio-vascular insufficiencies, especially acute myocardial infarction and cardiac defects, for periods of several days or weeks until the clinical condition has been reversed or stabilized, or until more effective treatment could be instituted. These would be used also after cardiac surgery to allow the heart time to recuperate. 3) The development of *permanently implantable assist systems* aimed at taking over a physiologically significant portion of the heart's workload for the remainder of the patient's life. 4) The development of *total heart replacement systems* which involves the transfer of all blood pumping activities of both ventricles to a permanently implanted total artificial heart.

Artificial heart devices have already been developed and used successfully, especially in the management of cardiogenic shock. It seems likely that new cardiac assist systems will be developed and assume an increasingly important role in the care of acute and chronic cardiac problems.

Afterword

It is easy to "predict" the past, but difficult to foretell the future. It is apparent that the 1970s will witness major advances in computerization of diagnostic facilities, aggressive coronary care, mechanical hearts, and cardiac transplantation. However, many other advances, some foreseeable and others not, will also unfold.

REFERENCES

1. Caceres, C. A., and Rikli, A. E.: Diagnostic Computers. Charles C. Thomas, Springfield, Illinois, pp. 1-86, 1969.
2. Meltzer, L. E.: The present status and future direction of intensive coronary care. Cardiov. Clin. 1(2): 178, 1969.
3. Pantridge, J. F.: Mobile intensive care in the management of myocardial infarcation. Cardiov. Clin. 1(2):294, 1969.
4. Chazov, E. I.: In Julian, D. J., and Oliver, M. F. (Eds.): Acute Myocardial Infarction. E. & S. Livingstone, Edinburgh, 1968.
5. Goldstein, S., and Moss, A. J. (Eds.): Symposium on the Pre-Hospital Phase of Acute Myocardial Infarction. Amer. J. Cardiol. 24:609-674, 1969.
6. Barnard, C. N.: A human cardiac transplant: An interim report of a successful operation performed at Groote Schur Hospital, Capetown. South Africa Med. J. 41: 1271, 1967.
7. Lower, R. R.: Cardiac transplantation. Cardiov. Clin. 1(3):251, 1969.
8. Brest, A. N. (Ed.): Heart Substitutes - Mechanical and Transplant. Charles C. Thomas, Springfield, Illinois, pp. 1-314, 1966.
9. Artificial Heart Program Conference Proceedings, National Heart and Lung Institute, National Institutes of Health, June 9-13, 1969, Washington, D. C.
10. Kantrowitz, A., Tjonneland, J., Freed, J. L., Jr.: Clinical experience with intraaortic balloon pumping in cardiogenic shock. J.A.M.A. 203:113, 1968.

Shifting Views in Medical Education

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The attitudes and opinions of some students and practitioners working in the world of medicine is changing. In recent times there has been a shift of interest toward the delivery of health care services, even to the point where students of medicine express doubt and displeasure about the medical curriculum and its content. A greater degree of them than ever before seem to be concerned with how to get medical service to all the people, while they simultaneously complain that medical school does not offer "relevant concern" to meet the health needs of the nation today.

One area in which one can especially observe this change is in the field of psychiatry. In some ways there seems to be more confusion in the minds of people today about psychiatry and the distribution of its services than has existed for many years. Twenty-five years ago, before the days of the tranquillizers, for example, psychiatry was strictly the province of the psychiatrist and the major psychotherapeutic schemes were based on psychoanalytic theory or eclecticism. There were fairly well defined limits of therapeutic endeavors and the limits of psychiatry were well known and accepted. At that time, people lived by principles which had been standards of human thought for several centuries. For instance, sex was thought somehow to be evil and war was patriotic. There seemed to be well defined differences of the sexes and when boundaries were obliterated one looked for some evidence of perverse tendencies.

But in the past twenty-five years remarkable changes have occurred in many quarters. Unisex is the vogue of the day. Now war is immoral and sex is acceptable. Medical students are as concerned with the distribution of medical service as they are with learning the content of it. In some groups, for that matter, it is tempting to say that there is even more concern about the problem of delivery. In psychiatry we have moved from the world of private and ward practice of patients in office and hospital by physicians trained in the specialty of diseases of the mind to a whole new world in which people of all gradations of training have entered the field of "mental health" and developed an enormous number of therapeutic devices and a whole new system for the distribution of their services.

Some of the reasons for this changing view are interesting to examine. It is far beyond the scope of this paper to consider the multiple reasons for the enormous social revolution that has occurred within the past few years. It is possible to examine and comment on some aspects of this at least those applicable to medical students, interns and residents in the field of psychiatry.

The overriding consideration lying behind the shift in emphasis seems to be the belief, popular once again, that the cause for the psychological ills of mankind is the result of a sick society. As Waelder has written, "The idea that behavior at variance with the prevailing moral standards is due not to human failure but to a failure of society, i.e., the concept of innocent man in wicked society, was introduced by Jean Jacques Rousseau. 'These vices', said Rousseau, pertain less to man than to badly governed man'. The idea has swept the world like wildfire." There is a disenchantment with psychiatry among many students both of the graduate and undergraduate level based on the notion that mental illness is the result of a sick society. Social ills must be improved or eradicated. Without this man will continue to suffer and be the victims of prejudice, racism and bigotry, all of which individually or collectively lead to the development of mental disorders. Beyond this one can hear students say that individual illness is not important, it is only the group which counts, or that the war in Vietnam is sheer madness, or even more striking one can hear from students the fact that the combination of badly governed man, social ills and the pollution of our natural resources are going to be a certain cause of our demise within our current lifetime and that succeeding generations of people will not even be born because the world will be annihilated as the result of these forces.

In many ways these issues can be reduced to two common denominators, namely, the cause and nature of mental disease as clinical entities and an interpretation of the views of the political Right and the Left. Generally speaking, there seems to be a diminution in the more sharply defined concepts held a few years ago about the mental apparatus and its psychopathology. Psychoanalysis has taught us the importance of the concept of the unconscious and the frailties of the human organism to cope with the demand of its own instinctual life and the demands of the world about it. In more recent times there seems to be a reduction of concern about the strength and even the existence of unconscious processes and old ideas in new terms are called upon to explain mental conditions. For example, the idea of adaptation as a concept is currently in vogue. While adaptation is, of course, an important concept, it tends to ignore the existence of unconscious mental drives. The idea that man is the victim of the "establishment" is equally untenable as an explanation for the development of phobias, schizophrenia, severe characterological disorders, mental deficiency, and so forth. It is hard to admit that the human has inner weakness as well as inner strength, that he has limits of endurance and of capacity, and far easier to place the blame on outside influences and outside forces.

The second proposition has to do with the view of the Right and the Left. In general, the Right has stood for traditionalism, individualism, elitism and capitalism, whereas the Left has stood for the opposite, namely, progressivism, collectivism and socialism. As Waelder has noted, Leftist thought in its concern with the condition of humanity, believes that humanity suffers as the result of individuals striving for individual goals which it condemns as immoral. The aim should be toward a fraternal order in which all men will strive only for the good of all. Secondly, good for all can only come as the result of the overthrow of the current power structure. The New Left adds an additional concept to traditional Leftist views, namely, that man is being dehumanized by the impersonal organization of modern society. In the view of the New Left there is concomitantly a wish for intense individualism on the one hand and on the other for a collectivism, an equality regardless of individual capacities, potentials or limitations. The elimination of poverty, the delivery of medical services to all, the establishment of medical treatment as a right and welfare as a right are seen by the New Left as circumstances which will insure the fulfillment of each and the fulfillment of all, to use Marx term. Such a position, of course, challenges one to question the fate of such cherished notions as liberty, justice, progress, security and achievement.

That each human is entitled to his place in the sun is indisputable. How he finds his place and maintains it varies with the social climate of the time in which he lives together with his genetic inheritance, his inherent strengths and weaknesses, the forces which are brought to bear upon him from without, including fate, and the price that he is willing to pay for the values which he cherishes. Everything has a price. To be concerned exclusively about acquiring medical knowledge which one then dispenses at his whim to those whom he selects as his patients ignores the needs of some and gratifies only personal desires. On the other hand, for the student to devote his energies to the uniform delivery of medical services to all runs the risk of diminishing an opportunity to acquire a body of knowledge historically rooted in scientific principle and the price one pays is the blurring of objectivity, that great stabilizer of human aspirations, the loss of which can lead perilously close to the precipice of destruction predicted by those who pass judgment on the human scene from a single vector.

REFERENCES

1. Waelder: The Philosophy of the New Left. The Activist. (Oberlin College Publication) Vol. 7, No. 2. Winter 1966-67.
2. Ibid.: Conflicts of Values and Moral Dilemmas. Penna. Bar Assoc. Quarterly, Vol. XXXVIII, No. 4. June 1967.

The Hand Surgery Service At Jefferson University Hospital

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and
LAWRENCE H. SCHNEIDER, M.D.
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Jefferson Medical College
Philadelphia

One quarter of the on-the-job accidents in the United States result in a disabling hand injury. While this figure is slightly lower than the percentage of injuries to the trunk (which is the most frequently injured area) it is relevant to note that the hand is the area where some degree of permanent disability will most likely result. In fact, over 40 per cent of work-related hand injuries result in some permanent disability. These patients comprise the major portion of those people treated by a busy hand surgery service.

It is to be desired that training programs for surgeons most interested and qualified in the care of hand injuries will make available to the community physicians more skilled in the treatment of these injuries and reduce in number the hand-injured who suffer permanent disability. Along with and inseparable from the goal of a hand surgery service to provide service to the community is the responsibility to train young surgeons in this field. To carry out this duty, the Hand Surgery Service at the Thomas Jefferson University Hospital is headed by two staff physicians plus a hand surgery fellow who is trained in either orthopedic, plastic or general surgery. A junior hand surgery resident supplied by the orthopedic surgery department rotates through the service at three month intervals. On occasion, elective rotations enable a general surgical resident or an intern to be exposed to hand surgery techniques. Formal teaching is undertaken at a weekly conference devoted to hand problems with teaching sessions at the clinic, office and operating rooms. A bi-weekly lecture series is directed to the senior medical students assigned to orthopaedic surgery.

Non-work accidents are also a source of disabled patients who come under our care, the hand being injured in a significant percentage of home, street and athletic mishaps. Disabilities secondary to birth defects, rheumatoid arthritis, degenerative diseases and tumors are also studied and treated.

Hand reconstruction draws heavily on advances in surgical techniques which have developed in the last two to three decades. Clinical and laboratory research being an integral part of teaching service, efforts have been concentrated particularly on the development of artificial tendons used to create a gliding mechanism for tendon motion in the face of severe tendon injury or failed tendon surgery. The first successful tendon prosthesis was developed and used at the Thomas Jefferson University. The results of over two hundred and fifty of these implants are being followed now in animals and humans. Other clinical research projects in progress involve the results of nerve repair in the upper extremity and an on-going study of the birth defect, "radial club hand." This defect, the result of congenital absence of the radius, is being carried out in cooperation with our affiliation at the State Crippled Children's Hospital at Elizabethtown.

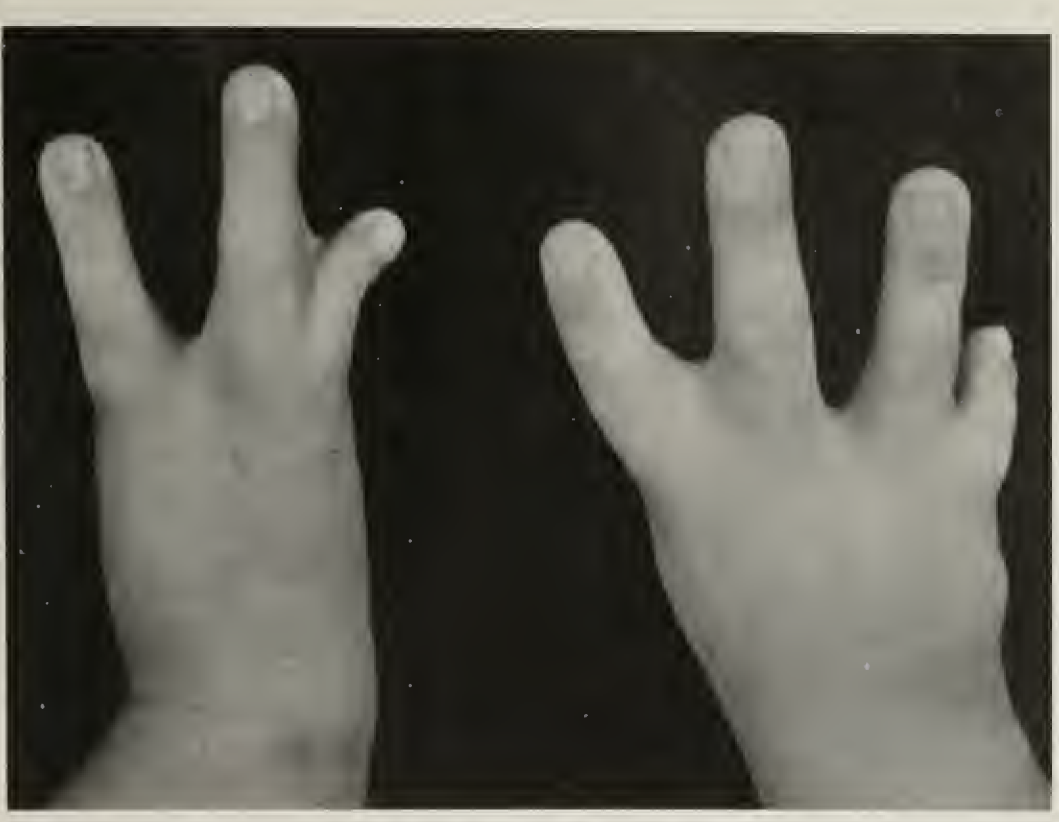


Fig. I (a) & (b): *A child born with multiple congenital defects in the upper extremities without thumbs. He had no prehension. The right hand was treated, through multistaged surgery, by "pollicizing" the radial most digit thereby creating a thumb for opposition.*

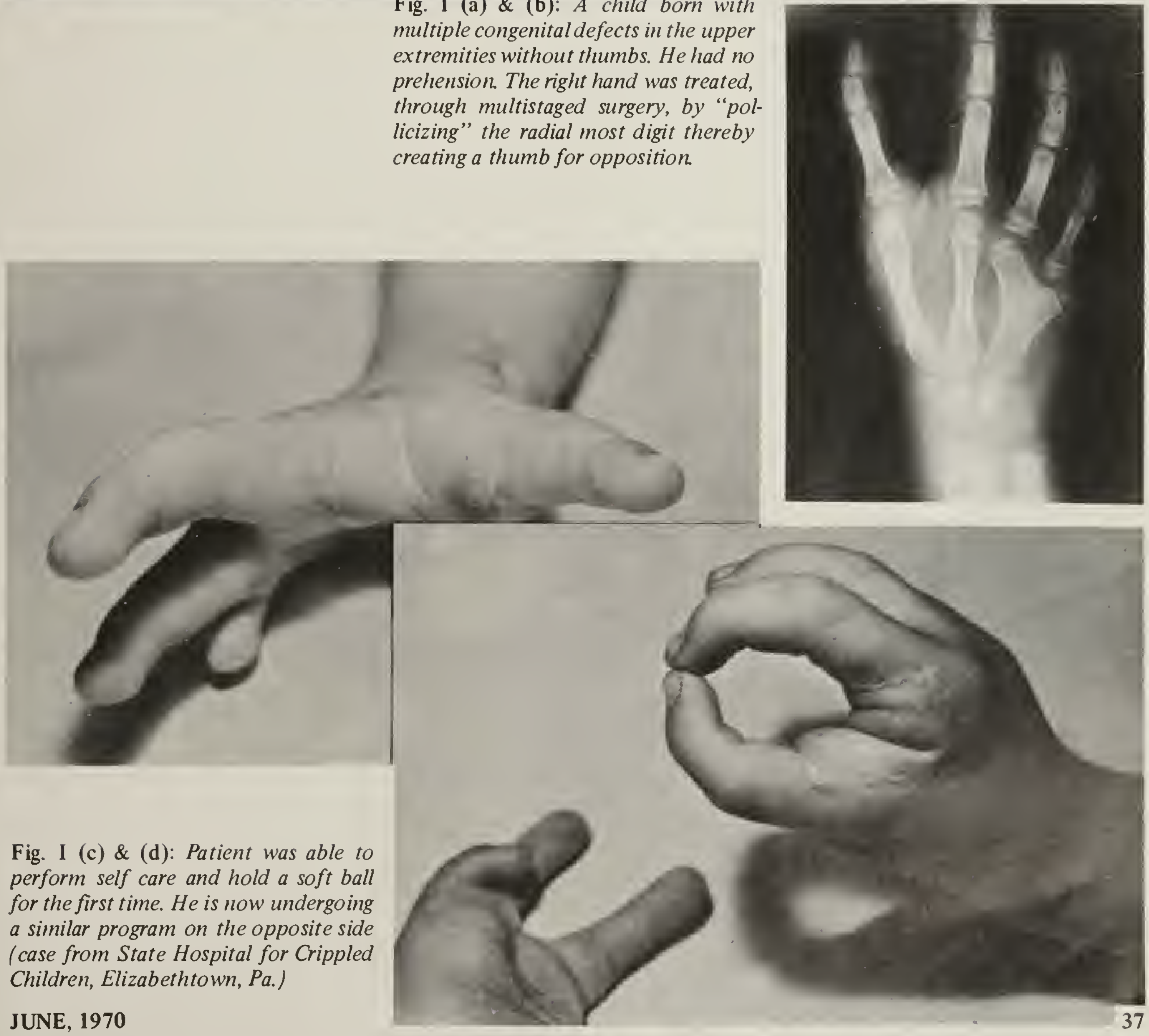


Fig. I (c) & (d): *Patient was able to perform self care and hold a soft ball for the first time. He is now undergoing a similar program on the opposite side (case from State Hospital for Crippled Children, Elizabethtown, Pa.)*

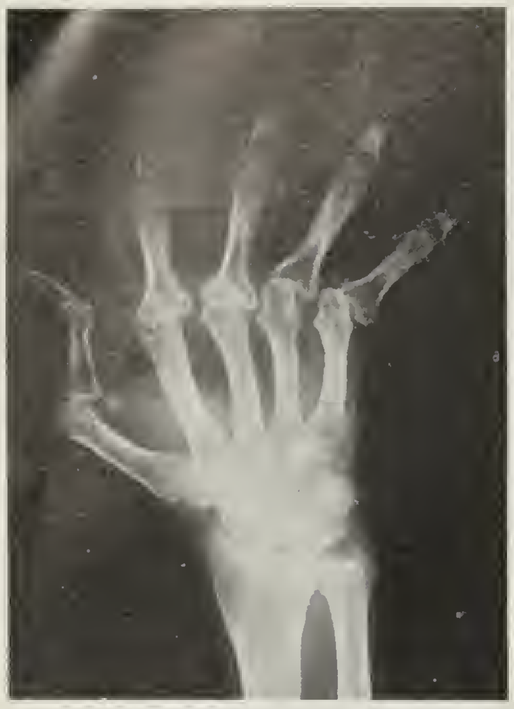


Fig. II (a): *An x-ray of the right hand of a forty-year-old housewife with family of five, disabled by rheumatoid arthritis. Note dislocations at the metacarpal phalangeal joints and ulnar drift of fingers.*

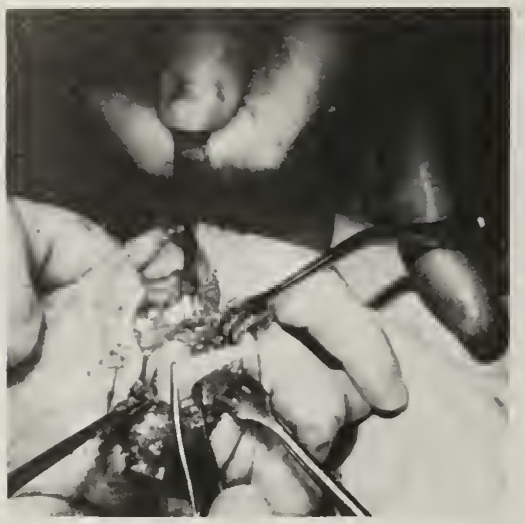


Fig. II (b): *The metacarpal phalangeal joints were rebuilt by replacement with silicone rubber joints (Swanson type).*

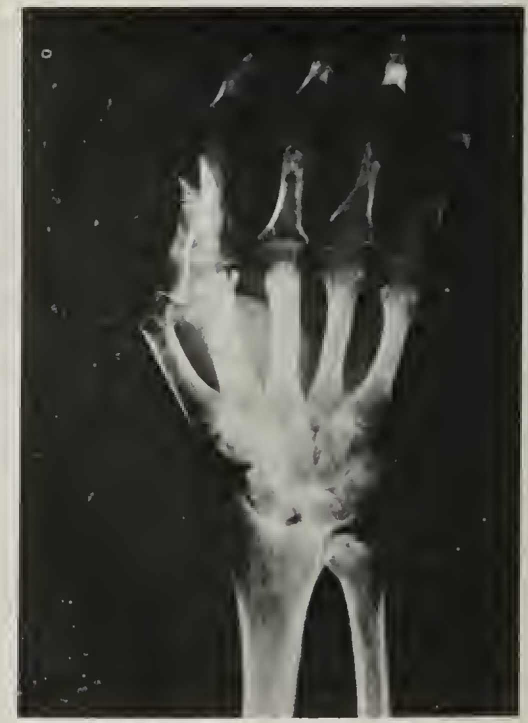
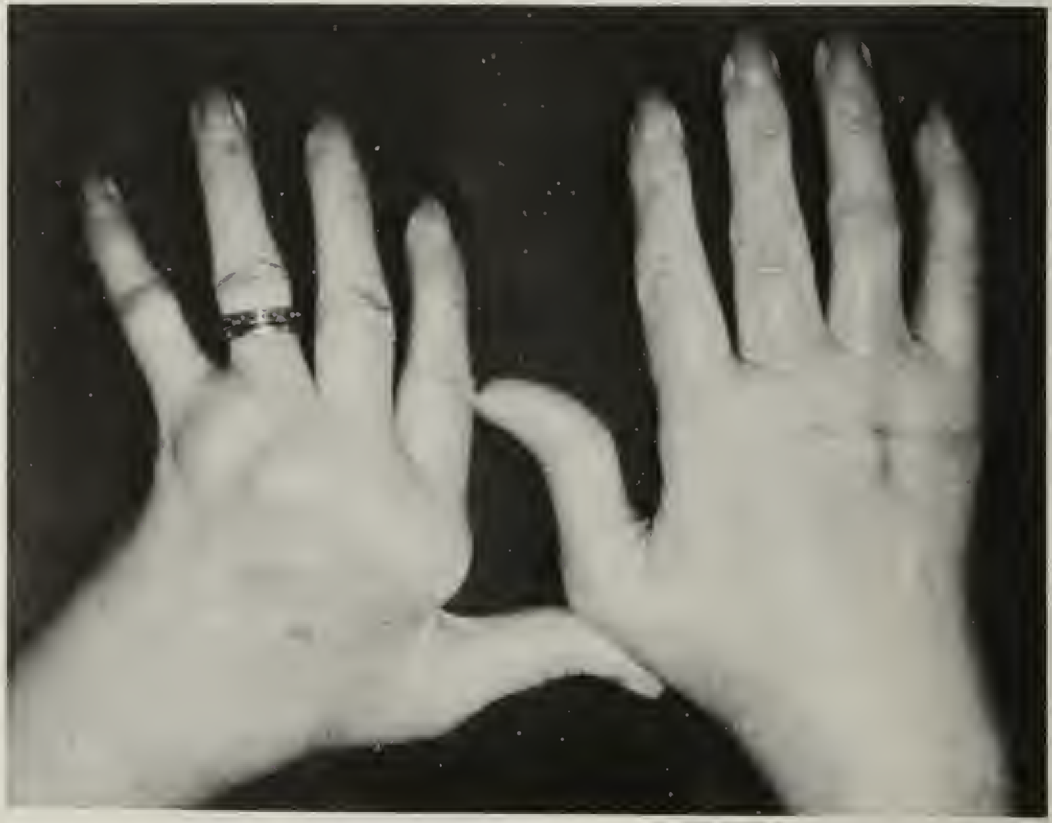


Fig. II (c): *Post-operative x-ray showing the joint prostheses in place, with improved appearance of hand.*

Future development and planning is aimed toward a goal to establish a Center for Hand Surgery Reconstruction and Rehabilitation at the Thomas Jefferson University Hospital. The purpose of the center is to focus the best existing knowledge and technical ability on the comprehensive care of those whose hands or upper extremities have been maimed by injury or disease. This would permit evaluation of the problem, reconstructive surgery, physical therapy, occupational therapy and prevocational planning to be programmed in one unit for the total patient care.

In summary, preservation of function of the hand by prevention of deformity is a primary treatment aim of the hand surgeon. When this is impossible, the restoration of function of the hand by correction of deformity becomes necessary. It is expected that informed attention directed to prevention of deformities will make complicated reconstructive work less necessary and reduce in number those with permanent disabilities of the hand.

Fig. II (d): *One year later showing correction obtained. She has excellent use of this hand now. The untreated left hand is shown for comparison. Patient now plans to have other hand reconstructed.*



Sullivan
First, there were tranquilizers for anxiety
Then, there were antidepressants for depression

1969, PFIZER

NOW, Pfizer Laboratories introduces

Sinequan®
DOXEPIN HCl

The tranquilizer that is
an antidepressant.

The antidepressant that is
a tranquilizer.

The first single agent with potent
dual action...active throughout the spectrum
of psychoneurotic anxiety/depression

New Sinequan® (doxepin HCl)... in coexisting anxiety/depression

142 patients with symptoms of both anxiety and depression were treated with Sinequan—*83% of the patients showed marked, moderate, or slight improvement.*

TARGET SYMPTOMS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT			% OF PATIENTS IMPROVED
			MARKED	MODERATE	SLIGHT	
anxiety/ depression	142	118	39	46	33	83%

In three double-blind studies comparing Sinequan and a fixed combination (perphenazine-amitriptyline), Sinequan was found to be at least as effective as—and in some cases more effective than—the combination.

New Sinequan... in prominent anxiety

238 psychoneurotic patients in whom anxiety was the most prominent symptom were treated with Sinequan—*84% of the patients showed marked, moderate, or slight improvement.*

DIAGNOSIS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT			% OF PATIENTS IMPROVED
			MARKED	MODERATE	SLIGHT	
psychoneurotic anxiety	238	201	92	59	50	84%

In eight double-blind studies of Sinequan and either chlordiazepoxide or diazepam, Sinequan was always found to be at least as effective as—and in some cases more effective than—the tranquilizers in relieving symptoms of anxiety.

New Sinequan... in prominent depression

259 psychoneurotic patients in whom depression was the most prominent symptom were treated with Sinequan—*81% of the patients showed marked, moderate, or slight improvement.*

DIAGNOSIS	TOTAL	NO. OF PATIENTS IMPROVED	IMPROVEMENT			% OF PATIENTS IMPROVED
			MARKED	MODERATE	SLIGHT	
psychoneurotic depression	259	210	106	72	32	81%

In five double-blind studies of Sinequan and amitriptyline, Sinequan was always found to be at least as effective as—and in some cases more effective than—the antidepressant in relieving symptoms of depression.

Data on File, Medical Research Laboratories, Pfizer Pharmaceuticals, Chas. Pfizer & Co., Groton, Conn.

Summary of clinical experience with Sinequan (doxepin HCl) in, Pitts, N.: The Clinical Evaluation of Doxepin—A New Psychotherapeutic Agent: Psychosomatics 10:164, May-June, 1969.

Adverse reactions:

Sinequan (doxepin HCl) is usua well tolerated, even in the elderl Those side effects which do occur are generally mild.

Most frequently observed side effects

Drowsiness has been observed, usually early in the course of therapy. It tends to disappear as therapy continues.

Anticholinergic effects (including dry mouth, blurred vision, constipation) have been reported. They are usually mild and often subside with continued therapy or reduction of dose.

Infrequently observed side effects

Extrapyramidal symptoms have been infrequent and have usually occurred at high dose levels. They tend to be mild and easily controlled.

Cardiovascular effects, such as hypotension and tachycardia, have been reported infrequently.

Other infrequently reported side effects include dizziness, nausea, increased sweating, edema, nasal congestion and weight gain.

Sinequan is noneuphoriant, and no dependence has been reported to date.

Safety:

Liver disorders, blood dyscrasias, lens opacities or pigment deposits in eyes or skin have not been reported to date with Sinequan.

Contraindications:

Sinequan is contraindicated in individuals who have shown hypersensitivity to the drug, and in patients with glaucoma or a tendency to urinary retention.

Warnings:

Sinequan should not be used concomitantly or within two weeks of therapy with MAO inhibitors.

Sinequan should not be used in pregnant women unless, in the judgment of the physician, it is essential for the welfare of the patient. Its use in children under 12 years of age is not recommended because safe conditions for its use have not been established.

(See last page for full adverse reactions, contraindications, warnings and precautions.)

Pfizer

LABORATORIES DIVISION
New York, N. Y. 10017

Recommended dosage:

Starting dosage—
25 mg., t.i.d.
Maximum dosage—
300 mg. per day.

Expected activity:

Antianxiety activity is rapidly apparent, comparable to that of the benzodiazepine tranquilizers. Antidepressant activity is comparable to the tricyclic antidepressants.

How supplied:

Bottles of 100 capsules of 10 mg., 25 mg., and 50 mg.; bottles of 1000 capsules of 25 mg. and 50 mg.

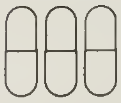
(ACTUAL SIZE)

10mg. 25mg. 50mg.

NEW

Sinequan®

DOXEPIN HCl



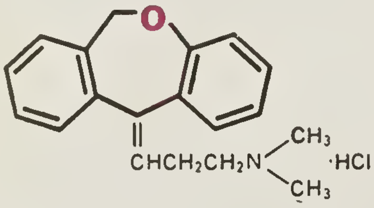
Starting dosage: 25 mg. t. i. d.

The first single agent that can be prescribed as a tranquilizer, an antidepressant...or both

SINEQUAN (Doxepin·HCl) Capsules

Description. SINEQUAN (doxepin·HCl) is a new dibenzoxepin psychotherapeutic agent with marked antianxiety and significant antidepressant activity.

Chemistry. SINEQUAN (doxepin·HCl) is a dibenzoxepin derivative and is the first of a new family of psychotherapeutic agents. Specifically, it is an isomeric mixture of N,N-Dimethyl-dibenz(b,e)oxepin-$\Delta^{11(6H)}$, γ propylamine hydrochloride.



SINEQUAN (doxepin • HCl)

Indications. In a carefully designed series of controlled studies, SINEQUAN (doxepin·HCl) has been shown to have marked antianxiety and significant antidepressant activity. SINEQUAN (doxepin·HCl) is recommended for the treatment of:

1. Patients with psychoneurotic anxiety and/or depressive reactions.
2. Mixed symptoms of anxiety and depression.
3. Alcoholic patients with anxiety and/or depression.
4. Anxiety associated with organic disease.
5. Psychotic depressive disorders including involutional depression and manic depressive reactions.

The target symptoms of psychoneurosis that respond particularly well to SINEQUAN (doxepin·HCl) include anxiety, tension, depression, somatic symptoms and concerns, insomnia, guilt, lack of energy, fear, apprehension and worry.

In those patients in whom anxiety masks the depressive state, SINEQUAN (doxepin·HCl) is of particular value since it exerts a potent antidepressant effect as well as antianxiety activity.

Patients who have failed to respond to other antianxiety or antidepressant drugs may benefit from treatment with SINEQUAN (doxepin·HCl).

Clinical experience has shown that SINEQUAN (doxepin·HCl) is safe and well tolerated even in the elderly patient.

In a large series of patients systematically observed for withdrawal symptoms, none were reported. This is consistent with the virtual absence of euphoria as a side effect and the lack of addiction potential characteristic of this type of chemical compound.

Contraindications. SINEQUAN (doxepin·HCl) is contraindicated in individuals who have shown hypersensitivity to the drug.

SINEQUAN (doxepin·HCl) is contraindicated in patients with glaucoma, or a tendency to urinary retention.

Warnings. *Usage in Pregnancy:* SINEQUAN (doxepin·HCl) has not been studied in the pregnant patient. It should not be used in pregnant women unless, in the judgment of the physician, it is essential for the welfare of the patient, although animal reproductive studies have not resulted in any teratogenic effects.

Usage in Children: The use of SINEQUAN (doxepin·HCl) in children under 12 years of age is not recommended, because safe conditions for its use have not been established.

MAO Inhibitors: Serious side effects and even death have been reported following the concomitant use of certain drugs with MAO inhibitors. Therefore, MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with SINEQUAN (doxepin·HCl). The exact length of time may vary and is dependent upon the particular MAO inhibitor being used, the length of time it has been administered, and the dosage involved.

Precautions. Since drowsiness may occur with the use of this drug, patients should be warned of the possibility and cautioned against driving a car or operating dangerous machinery while taking this drug.

Patients should also be cautioned that their response to alcohol may be potentiated.

Since suicide is an inherent risk in any depressed patient and may remain so until significant improvement has occurred, patients should be closely supervised during the early course of therapy.

Although SINEQUAN (doxepin·HCl) has significant tranquilizing activity, the possibility of activation of psychotic symptoms should be kept in mind.

Other structurally related psychotherapeutic agents (e.g. iminodibenzyls and dibenzocycloheptenes) are capable of blocking the effects of guanethidine and similarly acting compounds in both the animal and man. SINEQUAN (doxepin·HCl), however, does not show this effect in animals. At the usual clinical dosage, 75 to 150 mg. per day, SINEQUAN (doxepin·HCl) can be given concomitantly with guanethidine and related compounds without blocking the antihypertensive effect. At doses of 300 mg. per day or above, SINEQUAN (doxepin·HCl) does exert a significant blocking effect. In addition, SINEQUAN (doxepin·HCl) was similar to the other structurally related psychotherapeutic agents as regards its ability to potentiate norepinephrine response in the animal. However, in the human this effect was not seen. This is in agreement with the low incidence of the side effect of tachycardia seen clinically.

Adverse Reactions. Anticholinergic Effects: dry mouth, blurred vision, and constipation have been reported. They are usually mild, and often subside with continued therapy or reduction of dose.

Central Nervous System Effects: drowsiness has been observed. This usually occurs early in the course of treatment, and tends to disappear as therapy is continued.

Cardiovascular Effects: tachycardia and hypotension have been reported infrequently.

Other infrequently reported side effects include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as increased sweating, weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash, and pruritus.

Dosage. For most patients with illness of mild to moderate severity, a starting dose of 25 mg. t.i.d. is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg./day to 150 mg./day.

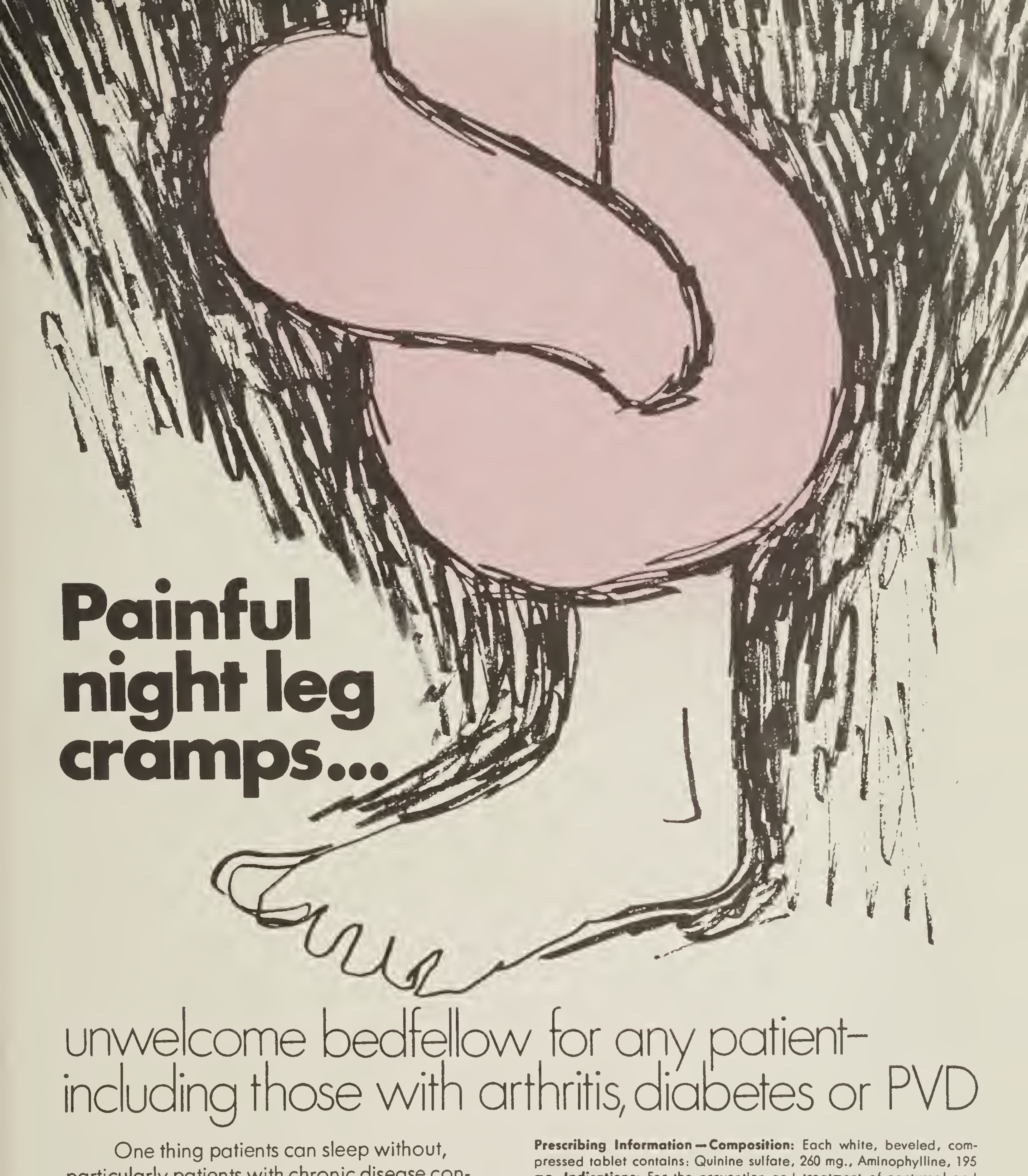
In more severely ill patients, an initial dose of 50 mg. t.i.d. may be required with subsequent gradual increase to 300 mg./day if necessary. Additional therapeutic effect is rarely to be obtained by exceeding a dose of 300 mg./day.

In patients with very mild symptomatology, or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg./day.

Although optimal antidepressant response may not be evident for two to three weeks, antianxiety activity is rapidly apparent.

Supply. SINEQUAN (doxepin·HCl) is available as capsules containing doxepin HCl equivalent to 10 mg., 25 mg., and 50 mg. of doxepin base in bottles of 100; and 25 mg. and 50 mg. in bottles of 1000. Issued September 1969

Pfizer
LABORATORIES DIVISION
New York, N.Y. 10017



Painful night leg cramps...

unwelcome bedfellow for any patient—including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

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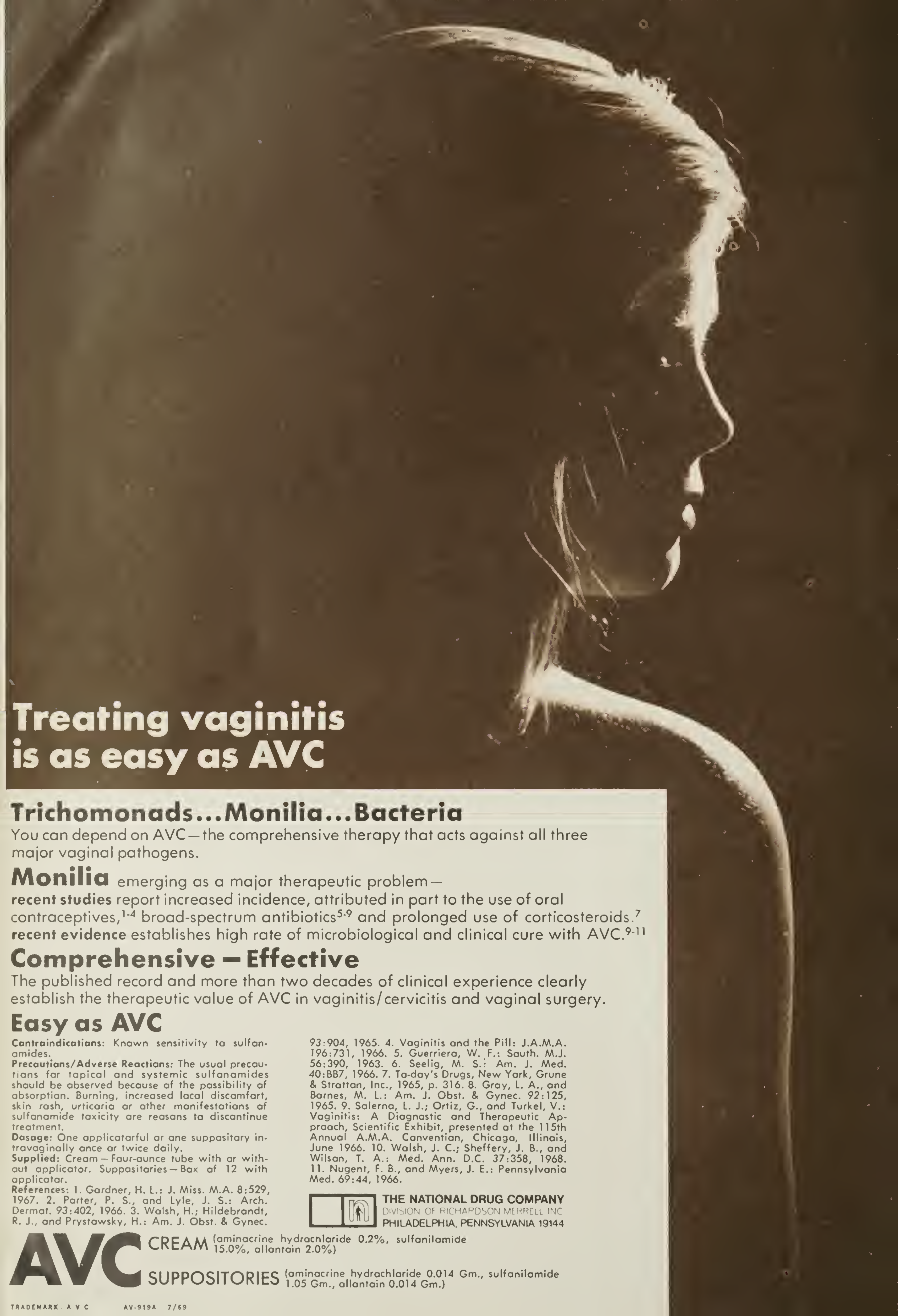
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia

emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive — Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfonamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfonamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfonamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppository intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositories—Box of 12 with applicator.
References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriera, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. To-day's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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AVC CREAM (aminacrine hydrochloride 0.2%, sulfanilamide 15.0%, allantoin 2.0%)
SUPPOSITORIES (aminacrine hydrochloride 0.014 Gm., sulfanilamide 1.05 Gm., allantoin 0.014 Gm.)

TRADEMARK AVC AV-919A 7/69

Himler Addresses Officers Conference on Health Care

The service component of health care in the 1970's will depend on the scientific and technologic advances of that decade, and the rapidity with which they are incorporated into clinical practice. There is no question that these will be impressive, and perhaps even revolutionary, but their extent is difficult to predict at this time. Service content is pertinent to our present discussion primarily because of the impact it will have on delivery systems.

The organizational structure of medical practice and the manner in which health services are delivered, while dependent in part on service content, will be more profoundly influenced by social, economic, and environmental conditions. In order to think clearly about the directions that health care delivery will take, we must evaluate these conditions and their trends. We must then establish whether or not organized medicine wishes to play an important role in determining how health services are to be rendered. If that answer is in the affirmative, and I think it should be, we must define the term "health" and decide how deep an involvement in health planning we wish to seek.

My committee and I recommended the adoption of the World Health Organization's definition of health; "Health is a state of complete physical mental, and social well being, and is not merely the absence of disease or infirmity." The committee report then went on to recommend that the A.M.A. ADOPT AN ACTIVE ROLE AND TAKE THE INITIATIVE IN DEVELOPING ALL PLANS AND PROGRAMS, IN ALL THEIR RAMIFICATIONS, and that it encourage and assist state and county medical societies to do the same at their respective levels.

This one definition and one recommendation raised the cry that their adoption would cause the A.M.A. to overextend its resources, enter fields in which it had no legitimate place, and set for it an unattainable goal. Perhaps this is so, but it seems obvious to me that there is an absolute vacuum of leadership in the field of health care today and that the A.M.A., as a large, well organized, and competent health professional organization, could serve as a nucleus or rallying point for the activities of all the health and health related professions. Most professional associations have the will to expand and adapt our systems of health service delivery to meet new and rapidly multiplying requirements, but they require guidance and coordination. It is immaterial whether the goals we set are attainable since most ideal situations are beyond our immediate reach, yet striving for them gives us direction. If we are careful to set up strict and realistic priorities, we will achieve worthwhile progress, even as we fall short.

At this point, it will be useful to review the major phenomena in health care of the 1960's and examine the responses of the organized medical profession to them. Probably the most important single happening was the explosive increase in demand for health services. For an audience of this type, there is no need to review the reasons for this pressure, it is sufficient to observe that, like most violent occurrences, it brought crises in its wake. It highlighted a grave shortage of professional health personnel, particularly physicians. In addition, the increased demand aggravated the regional health service deficits of the ghettos and the rural areas. It threw into bold relief the fact that there existed a serious maldistribution of physicians, not only in terms of geography, but in terms of specialty as well.

To turn to the subject of delivery systems, many segments of labor, management, and government, when they espoused universal health insurance, adopted, with equal enthusiasm, the concept of hospital based group practice and capitation prepayment. This is neither the time nor the place to explore the relative merits of solo practice, group practice, fee-for-service, and capitation prepayment. The point I wish to make here is that this expression of preference for capitation prepaid group practice evoked, from some physicians and some medical organizations, a vehement defense of private practice and an active attempt to foster it against the inroads of other methods of delivery, a defense that was unnecessary and perhaps self-defeating.

Capitation group practice, in spite of the many virtues claimed for it as a primary delivery system, has not been substantially cheaper than other methods, nor does it usually or necessarily provide care of better quality. It requires extensive initial financing, a rather specific social and economic status among its participants, and full payment for all individuals covered. It has been found to function well in some areas, but has never achieved great consumer acceptance. It will probably be one of a number of delivery and payment mechanisms of the future and should be allowed to find its own level. I deem it more important that organized medicine accept and encourage experimentation in delivery systems on an open and competitive basis, than that it try to perpetuate what now exists. There seems to be no single, universally applicable system of practice or payment and the very complexity of our social and economic structure requires a pluralistic approach, in which the medical profession should lead.

Assuming, then, that we agree that there will be a number of approaches to the rendering of medical care, and granted that the majority of physicians wish to preserve private practice, we can no longer avoid asking ourselves "precisely what makes a practice private?" We must also inquire whether all the elements that enter into private practice as it exists today are fundamental to its nature or necessary for the preservation of its best attributes.

One characteristic of private practice is that both physician and patient agree to establish the relationship. Each is free to accept or reject the other. The individual physician enters into an explicit or implicit contract with the patient for the latter's care. Thereafter, the physician is in complete control of the patient's medical management. Finally, the patient personally assumes the obligation of paying the physician a fee for his services, with or without insurance assistance.

This one to one relationship is advantageous for the patient since he receives direct, personalized care from a physician of his choice. The physician, in turn, has control over the circumstances under which he practices and over the care of his patients. He is also enabled to set his own value on his services.

As we proceed from solo to group practice, each of these elements begins to erode. When we get to institutional practice, they may have disappeared entirely, at least from the physician's point of view. As far as patients are concerned, there are ways of avoiding complete depersonalization of care so that they will generally accept institutional care if, in so doing, they receive other benefits or avoid out of pocket expense.

With this background, what of the future? The forms that medical practice will take in the 1970's will depend on the interaction of a number of factors, some of which are unpredictable at this time. The requirements and preferences of the public, which have already been touched on, will certainly have an important influence. Other determinants will be the attitudes and objectives of new generations of physicians. I have observed that young physicians are considerably less concerned than we about the specific forms of their practice and reimbursement, as long as they are assured certain conditions and benefits. These include a stimulating professional environment with time and opportunity for continuing education, early, adequate, and increasing earning capacity, guaranteed free time and vacation time, and the fringe and retirement benefits that normally accrue from employment or corporate group practice. Some of these advantages are conspicuously absent from solo practice, so it is not surprising that most recent graduates who wish to engage in clinical medicine enter partnership, group, or hospital practice. I have a sneaking suspicion that they are indifferent to whether they are paid on the basis of salary, capitation prepayment, or fee-for-service, as long as their reimbursement is commensurate with their training and ability.

These attitudes, plus the pressures being exerted by consumers and government, explain the strong trend toward group practice that is now evident. It seems reasonable to predict that the number of solo practitioners will dwindle steadily with the passage of time. The question then arises as to how future groups will be organized and how they will relate to hospitals.

There are a number of factors that favor the physical association of groups, and even individual physicians, with hospitals. Medical care is becoming increasingly complex and often calls for elaborate, sophisticated, and expensive equipment. In addition, the exigencies of modern life are such that solo practitioners and groups alike find it economically and professionally advantageous to locate their practices in or near their hospitals, though there may be no formal financial relationship between them. In an era of increasing bed shortages, voluntary staff physicians are finding that the beds available for the care of their private patients are diminishing steadily in number and are in the process of being preempted completely by those with closer ties to the hospital. All these factors tend to make the hospital the geographic hub of health services.

Does this mean, then, **that medical care in the future will be rendered exclusively by networks of hospitals and clinics and that physicians must reconcile themselves to becoming employees and technicians?** That is precisely what many hospital administrators, boards of trustees, and hospital associations have come to think, and it is a strong possibility unless those who value private practice can reorganize that delivery system to make it responsive to present needs and competitive in an increasingly cost conscious age.

Once we accept the inevitability of a higher degree of organization in the structure of our delivery system of health services, and realize that hospitals and clinics will probably be the loci of delivery, though not necessarily the providers of services, we can foresee an almost unlimited number of acceptable practice arrangements. These can include solo, group, and hospital practice with professional payments based on fees for individual services or "packages" of services through insurance prepayment and self payment, or capitation prepayment for socalled "total care." The exact mix of these practice and payment modalities is unpredictable at present, nor is it important. What is important is that we prepare the medical societies and organize the physicians to negotiate the terms and conditions under which they render their services in the future, whether the purchasers are government, labor, consumer groups, or individuals. Single physicians and small groups can no longer deal effectively with these mass purchasers. The medical societies are the logical agencies to perform the negotiating function, but they must be closer knit among themselves, have accurate data at their disposal, develop cadres of effective negotiators, and establish their sole right to represent their members.

To do this, we must abandon some of the shibboleths the profession has nurtured so carefully, **sacrifice a few sacred cows, and** think dispassionately about our true requirements and objectives. The medical societies will have difficulty in reestablishing their stature and affirming their right to intervene in these matters. If they are to do so successfully, in addition to the rearguard, defensive actions they must fight, they must also **take the leadership in active, forward-looking health planning,** which they have failed to do to date.

I have not the time to go into how this may be done. The report of my committee contained a number of recommendations to this end. The House of Delegates will pass on them in due time but, in my opinion, their fate is almost unimportant. The essential thing is that the A.M.A. will finally face, and try to resolve, the basic issues that confront it. It is also encouraging that the House of Delegates understands the importance of meticulous and continuous planning and apparently intends that it continue, since a new committee on planning and development will be proposed.

Continuing a policy of "Search and Destroy"

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For the past thirty years we have continued a policy of vigorously searching for and destroying or removing colon and rectal polyps when encountered. We have seen no reason to alter this attitude despite the many controversial articles that have appeared in the literature in recent years. This presentation explains why this approach should be continued based on the experience of one of us (N.W.S.).

My (N.W.S.) interest in the relation of colon and rectal mucosal polyps to cancer was first stimulated by Frank Lahey in the middle 1930's. It was his belief and that of others at the time that the majority of, if not all, bowel cancers arose in preexisting benign mucosal polyps and that if a patient with a benign mucosal polyp lived long enough, a true cancer eventually would develop. Thus, benign mucosal polyps were to be considered as definite premalignant tumors and, when found, removed or destroyed.

In 1958, many of us were rudely awakened from our complacency by the publication of the paper by Spratt, Ackerman, and Moyer[4] casting doubt as to the role of the adenomatous polyp in the evolution of bowel cancer. This paper has undoubtedly done a great deal of good, as it aroused a tremendous amount of interest in the subject of the relation of bowel cancer to polyps. It has resulted in many physicians being more conservative in the treatment of polyps, but it probably has not converted many to the idea that there is not an intimate relation between benign mucosal polyps and cancer.

We have always been impressed with the frequent occurrence of invasive cancer in mucosal polyps, and we repeatedly see specimens showing benign, adenomatous changes, invasive cancer, hyperplasia, and occasionally even villous components in the same specimen. Whether these areas of invasive cancer seen in otherwise predominantly benign mucosal polyps are coincidental or represent a stage in the development of cancer is not conclusively proved. No one, to our knowledge, has observed in a single patient the progression of normal mucosa through hyperplasia and polyp formation to invasive, metastasizing cancer. We believe, however, that there is increasing evidence that polyps may represent, in many instances, a phase in the development of cancer.

Legg,[3] from the Laboratory of Pathology of the New England Deaconess Hospital, has recently reviewed the polyps from 2,940 patients. These were all operative specimens; obvious villous polyps and polyps found in patients with congenital multiple polyposis were not included. In this series there were eight adenomas with noninvasive carcinoma or carcinoma in situ. There were thirty-seven adenomas with invasive cancer extending into the lamina propria, forty adenomas with cancer extending into the muscularis mucosa, ten adenomas with cancer invading the stalk, three adenomas with cancer extending into the base of the polyp, and three adenomas with carcinoma extending into the muscularis. Fifteen patients had polyps with a villous component and localized invasive cancer. Forty-three specimens exhibited early polypoid carcinoma, there being no evidence of any polypoid formation in the specimen. Thus, in this entire series, 3.8 per cent of all polyps had some focus of cancer. If polypoid cancers are added to this figure, the incidence would be 5.4 per cent.

It must be reemphasized that this series was made up of operative specimens that were examined by pathologists. It has always been the policy in our group to fulgurate or excise polyps less than 5 mm. in diameter without pathologic study. These small polyps make up an appreciable number of all the polyps seen in the colon and rectum and are not included in these percentages. The exclusion of small polyps has perhaps increased these percentages somewhat. We have followed up patients treated for these small polyps without histologic examination for many years, and we have never had occasion to regret this policy.

The discussion on polyps from the Mayo Clinic in Jackman and Beahr's recent text[2] is very impressive. All interested in this subject should be familiar with this report. Jackman discussed three groups of polyps based on size. These were diminutive, less than 5 mm. in diameter; medium, from 6 mm. to 1 cm. in diameter; and larger polyps, greater than 1 cm. in diameter. From this study, he conclusively demonstrated a definite evolution from benign to malignant conditions in these tumors. In his series there was a striking increase in carcinoma in proportion to the size of the tumor, varying from 0.6 per cent in the diminutive lesions showing carcinoma in situ to 18 per cent in the larger polyps showing definite invasive cancer. Jackman believes that, based on this data, he must continue to consider adenomatous polyps of the large bowel as premalignant lesions.

Recently other reports have appeared in the literature that have emphasized the intimate relation of polyps to cancer. Several authors have stressed the fact that cancer was twice as likely to develop in patients with multiple polyps as in those who have a single polyp. We have found that 25 per cent of specimens removed for large bowel cancer have demonstrated associated benign mucosal polyps. Other authors have emphasized the relation of the size of the polyp to the potential development of cancer. Spratt, Ackerman, and Moyer[4] have stated that the chance of a tumor 1.5 cm. in diameter or larger becoming cancerous later is greater than the risk of its surgical removal. Bockus and associates[1] have noted that 24 per cent of the polyps larger than 1.2 cm. are cancerous, but less than 4 per cent of polyps smaller than 1.2 cm. show evidence of tumor. My group agrees with Jackman's conclusions and with those of the other authors mentioned. It probably will not be proved conclusively that benign mucosal polyps of the colon and rectum are premalignant lesions until some type of a specific biologic test has been developed to determine this. It must also be stated that no one has yet proved that benign mucosal polyps are not premalignant lesions. Based on the evidence to date, we will continue vigorously to search for and destroy or remove benign mucosal polyps of the colon and rectum when they are encountered.

There are two other aspects of the problem of rectal polyps and cancer which should be reviewed in any discussion on this subject if we are to improve the end results of our attack on cancer in these locations. Occasionally reports in the literature from prominent institutions and physicians deemphasize the value of proctosigmoidoscopic examinations. Admittedly, the yield in the detection of cancer from routine proctosigmoidoscopic examinations in asymptomatic patients is low. It is time-consuming for the busy internist or general practitioner to perform large numbers of proctosigmoidoscopic examinations. However, we do not believe there is any excuse for a surgeon or internist who does diagnostic studies not to include sigmoidoscopic examinations, nor is there any excuse for him not to have adequate facilities for such studies for patients with suggestive symptoms. Too often, in our experience, patients seen with bleeding or other rectal symptoms may not previously have had even a digital examination. Although they have had barium enema examinations, the results of which were reported as negative, their symptoms continued. They have come to us stating that one of their friends has been examined by our group with an instrument that actually sees up into the lower bowel, thus locating the source of the bleeding. They are fearful of cancer. They have had a relative or a friend or have heard of persons who have previously had a colostomy but who have died after operations for bowel cancer, and they wish to be reassured. We find that more patients are operated on for bowel cancer at a late date because of the negligence of physicians in not carrying out adequate examinations than because of delayed reporting of symptoms by the patients.

Two years ago one of our residents carefully reviewed 1,000 consecutive proctosigmoidoscopic examinations. Of these patients, six had cancer. They were all symptomatic, yet in two it was doubtful if the bowel symptoms were actually related to the tumor. Two of these patients had been treated for months with suppositories and other local remedies without adequate examination.

This experience is typical of what we have encountered for many years, and one of the prime objectives of groups such as Societies of Colon and Rectal Surgery should be the education of students, interns, residents, surgeons, and internists to appreciate the importance of this problem. Familiarity with the proctosigmoidoscope should begin when students are indoctrinated in the use of the stethoscope, the vaginal speculum, the otoscope, and the laryngoscope.

About 1935, not more than 200 or 300 proctosigmoidoscopic examinations were performed at the Lahey Clinic in any one year. This year, the number will approach 10,000. The incidence of pathological findings encountered has increased proportionately. Of the patients who come to the clinic for complete physical examinations, 65 per cent are routinely given a sigmoidoscopic examination whether they have symptoms or not. We find 10 per cent of these patients have benign mucosal polyps. This percentage is somewhat higher than would be found in the normal population because there is some screening both by our department of gastroenterology and by outside, referring physicians.

There is argument both for and against performing routine proctosigmoidoscopic examinations in asymptomatic patients. Some believe that when carefully performed, a properly interpreted guaiac test may present clear indications for instrumental and roentgenologic examinations. Certainly there will never be enough physicians interested in doing endoscopic work to perform proctosigmoidoscopic examinations on everyone in the United States. I would dread, however, to see this type of diagnostic work delegated to nonprofessional personnel, as has been suggested by some.

Another point worth mentioning is that recent advances in the field of radiology have increased the value of radiologic studies in patients with polyps in the colon. Perhaps over the years the one change in our attitude toward the removal of colon polyps has been that we are now willing to observe colonic polyps in some of our older, poor-risk patients for a period before making a definite decision to remove them. Using the data of Welin and his associates,[5-8] we can radiologically evaluate the likelihood of a malignant condition developing in a polyp from its size and appearance after an air contrast barium enema. While the result is no substitute for a histologic diagnosis, it can be useful in evaluating the risk of postponing operation in selected cases.

REFERENCES

1. Bockus, H. L., Tachdjian, V., Ferguson, L. K., et al.: Adenomatous polyp of colon and rectum; its relation to carcinoma. Gastroenterology 41:225-232 (Sept.) 1961.

2. Jackman, R. J., and Beahrs, O. H.: Tumors of the Large Bowel. Philadelphia, W. B. Saunders Co., 1968, pp. 36-43.

3. Legg, M. A.: Personal communication.

4. Spratt, J. S., Jr., Ackerman, L. V., and Moyer, C. A.: Relationship of polyps of the colon to colonic cancer. Ann. Surg. 148: 682-696 (Oct.) 1958.

5. Welin, S., and Youker, J. E.: Colonic polyps. In Margulis, A. R., and Burhenne, H. J. (Editors): Alimentary Tract Roentgenology. St. Louis, C. V. Mosby Co., 1967, pp. 811-833.

6. Welin, S., Youker, J. E., and Spratt, J. S., Jr.: The rates and patterns of growth of 375 tumors of the large intestine and rectum observed serially by double contrast enema study (Malmö technique). Amer. J. Roentgen. 90:673-687 (Oct.) 1963.

7. Youker, J. E., and Welin, S.: Differentiation of true polypoid tumors of the colon from extraneous material: a new roentgen sign. Radiology 84:610-615 (April) 1965.

8. Youker, J. E., Welin, S., and Main, G.: Computer analysis in the differentiation of benign and malignant polypoid lesions of the colon. Radiology 90:794-797 (April) 1968.

Rat-bite Fever at Albert Einstein Medical Center

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No instance of Rat-Bite Fever had been seen in the century of existence of the Albert Einstein Medical Center and its preceding institutions until recently.

Case History

B. M., a 34-year old white male salesman was seen in my office on August 26, 1965, for emergency consultation. On August 4, 1965, he had bought a black and white mouse for a house pet. It proceeded to bite him in the left thumb that same afternoon. He received a tetanus injection at a hospital that night and reported the incident to the Philadelphia Board of Health the next day. The mouse was still alive on August 26, 1965, but was dragging a two-week old neoplasm below its tail.

On August 21, 1965, the patient noted slight malaise, a few fleeting twinges at the nape of the neck, general achiness and supra-orbital discomfort, followed by a fever of 100° F. Slight sore throat had been present for one day. Rheumatic fever as a child was not followed by sequelae. Temperature at examination was 99.8° F. Pulse was 108 per minute and regular. Blood pressure was 116/70. There was a slight accentuation of the first apical heart sound. The left epitrochlear lymph node was enlarged, more than the right. Otherwise, physical examination, including rectal and neurological, was not contributory. Lesion of entry was healed.

The patient was immediately admitted to the Albert Einstein Medical Center with the diagnosis of rat-bite fever. Specifically, because of the length of incubation and the mildness of the symptoms and signs, **Spirillum minus** infection was postulated.

Complete blood count found 14.1 gm hemoglobin, 46 per cent hematocrit, platelets 130,000 and white cells 8200 per mm, with 50 per cent polymorphonuclear leukocytes segmented and 5 non-segmented, 39 lymphocytes and 6 monocytes. Westergren sedimentation rate was 5 mm/hr. Stat blood culture showed no growth in six weeks. Postprandial blood sugar was 93 and blood urea nitrogen 23 mg per 100 ml. Blood serology was negative. Electrocardiogram was normal. Urinalysis was negative.

Without specific medication, temperature dropped to normal. On August 28, the patient left the hospital against medical advice.

Examination of the culprit mouse for rabies by the Philadelphia Department of Health Laboratory found brain tissue smear, fluorescent antibody technique and mouse inoculation examinations negative.

The Pennsylvania Department of Health Laboratory examined a sample of blood serum and found tube test positive for *Streptobacillus moniliformis* with a titer of 1:128.

Final diagnosis was rat-bite fever due to *Streptobacillus moniliformis.*

Discussion

Rat-bite fever may be caused by either of two organisms, *Streptobacillus moniliformis* and *Spirillum minus.* Both are transferred by the bites of rats, mice, guinea pigs or other rodents. The former, as in the 1926 outbreak at Haverhill, Massachusetts, may become epidemic by ingestion of contaminated food. The Haverhill fever which ensues is similar clinically to rat-bite fever except for lack of rodent bite.

Streptobacillus moniliformis infection is the more severe disease. Incubation is short, one to three days, but may range up to twenty-two days. Onset is sudden, with fever, headache, myalgia and malaise. Chills occur. A lesion may occur at the site of the rat-bite. Regional adenopathy is not prominent. A discrete macular rash appears one to three days later, particularly involving the extremities. This may become general, confluent, papular, pustular or petechial. Multiple arthritis with hot, swollen and tender joints may follow. With antibiotic therapy, subsidence occurs in about a week and the mortality rate is very low. Prior to antibiotics, the mortality rate was about 10 per cent. Penicillin and other antibiotics are effective.

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Laboratory findings usually include leucocytosis (about 12,000 per cu.mm.), neutrophilia, normal platelets, and possibly a positive tourniquet test. The organism can be isolated from blood, joint fluid or pus during the acute phase and up to two weeks thereafter. Agglutinins appear during the second to third week of illness, with increasing titer. False positive serologic test for syphilis occurs in about 15 percent of cases.

Spirillum minus infection (sodoku) is the lesser of the two conditions. The incubation period is longer, one to six weeks. The site of the bite becomes swollen, tender and cyanotic, with regional lymphadenitis. Chills may precede bouts of two to four days of fever alternating with afebrile periods of similar length. Accompanying the fever may be malaise, sweating, photophobia, nausea and vomiting, arthritis and a rash. The last two occur in about 50 per cent of cases. The eruption usually involves the extremities and is an asymmetric conglomeration of reddish or purplish plaques. The course of this type of disease may run four to eight weeks, but is never fatal without complicating illness.

Laboratory observations include a normal leucocyte count usually and frequent biologic false positive serologic tests for syphilis. The *S. minus* is seldom found in the patient's blood or tissues by direct examination. After intraperitoneal inoculation of mice or guinea pigs with patient's blood, the *S. minus* may be found in the animal's blood by dark-field examination one to three weeks later. Blood culture may be positive. Therapeutically, prompt response follows administration of arsenicals, but penicillin, streptomycin, and the tetracyclines have also been effective.

PENNSYLVANIA MEDICINE special report

Health Care in Pennsylvania In the 1970's

This is an article prepared by the Pennsylvania Medical Society and presented to the major political parties in the state for their consideration in drafting the health aspects of their respective party platforms. Because it is limited to those aspects of health and medical care most likely to be affected by legislation, it is not a definitive description of the State Society's total attitude toward the entire health care field.

Health care in Pennsylvania in the 1970's is flirting with crisis, although the degree of the present and coming problem in the Commonwealth has been exaggerated and is less than that facing most of the remainder of the nation. It also is true that government has manufactured a significant portion of the problem by pledging the services of already overburdened health manpower and facilities. With a shocking inconsistency, at the same time that government has been pledging additional services it has been decreasing the financial support needed to educate more health care professionals.

This pledging of services and the acceptance of quality medical care as a human right has resulted in a continuing rise in public expectations that are far above the reality of the situation.

The gaps between the actual and ideal delivery of health care has been blown far out of proportion by proponents of complete or partial nationalization of health services. Such proponents frequently confuse symptoms with causes and describe the results of social problems as the causes of those problems.

Residents of some Pennsylvania urban and rural sectors have never received optimum health care, are not receiving it now and they will not receive optimum care regardless of the system used to deliver it until such time as sweeping social changes may take place. The availability of quality medical care will not guarantee that it is used by those who need it most. Those for whom such care is designed must be motivated to use it and this all too frequently involves major social changes that are decided by all citizens, not just health care professionals.

> *The major gap between the need for health care and the delivery of health care results from this lack of motivation to use that which already is available.*
>
> *The minor part of the problem – and the one which mistakenly is considered by many persons to be the major one – is that segment of the public which is motivated to seek health care that is not available at a cost, time and place of the public's choosing.*

In the latter category are the residents of certain rural areas and towns in the Commonwealth where the growing shortage of health care professionals – particularly physicians – has hit hardest. It is human nature to exaggerate a portion of this need. For example, a small town may have lost its only physician through retirement or death and the residents become militant about the need for a replacement without realizing that medical care in an adjacent town is no further away in minutes than was the care their local physician provided a decade ago with less efficient transportation and highways and which is no further away in minutes than that available to the metropolitan dweller confronted with traffic and parking problems.

Both portions of the problem are cause for concern by the Pennsylvania Medical Society and its 12,000 physician-members. We hope that ways can be found to place physicians where they are needed most and we hope that those who need medical care can be motivated to use that which is available. However, in a democracy we doubt that attempting to force a physician to practice at a location that is not of his own choosing is any more practical or even desirable than passing laws mandating every member of the public to seek physician care.

For instance, we also are concerned about the less than desirable nutritional levels of many Pennsylvanians, particularly those in economically deprived urban areas. A majority of such nutritional problems can be corrected without increased family budgets by having the food buyer purchase the proper foods. Again, closing this portion of the gap requires massive consumer re-education – in reality, social change. Few would propose the nationalization of food production and distribution as a solution to the problem and yet this aspect of the nutritional deficit is analogous to the portion of the medical care gap previously described as due to lack of motivation to use available services.

> *The most significant single factor in the direct health care delivery gap is the shortage of health manpower, particularly physicians. The average practicing physician has a work week in excess of 65 hours and is at or very near the limit of his endurance and efficiency. Regardless of the system that may be imposed, there can be no significant increase in the amount of medical care now being provided unless the number of physicians is increased.*

Increased Manpower

The Pennsylvania Medical Society is convinced that the biggest single barrier to turning out more physicians quickly is a financial one. It believes that enrollment at Pennsylvania's seven medical schools could be doubled in a matter of months if there was sufficient federal and state aid available on a per student basis. This could be done without additional bricks and mortar by operating each medical school on two "shifts" instead of the present one. If the financial barrier to this can be solved, we feel that it is possible to meet the other needs, such as an increase in the number of teachers and anatomical specimens for study.

It is estimated that it costs a minimum of $11,000 a year to educate each medical student and tuition charges range from $540 to $2,550 in Pennsylvania. Thus, tuition covers only a small portion of the actual cost. If governmental financial support was significant and directly linked to the number of students being educated, it would enable medical schools to enroll and turn out the number of physicians the growing public demand and expectations require. By significant support, we suggest that this should total about $8,000 per year per student plus the availability of loan funds for students themselves.

We also are aware that there is legislative reluctance to commit significant amounts of Pennsylvania tax monies to the education of medical students in Pennsylvania's seven schools when it is obvious that these seven schools turn out many physicians who practice in other states. Perhaps the ideal solution is for the monies to come from the federal government, either directly or in reimbursement to the Commonwealth for this specific purpose.

In any event and as we pointed out earlier, federal support for more physicians has decreased rather than increased at a time when the shortage grows worse. We feel that bold, decisive action must be generated immediately by state leadership. It is indeed unfortunate that the federal government has designed and caused to be implemented sweeping health care programs such as Medicare and Medicaid without making sweeping changes in its incentive to produce more physicians. The result has been an increased burden on already over-stretched health manpower resources.

> *Every right carries a responsibility. With the public's right to medical care, there is a public responsibility to support the training of the medical personnel needed to render that care.*

Financial assistance to medical schools on a per student basis would be a giant improvement over the present method whereby the schools negotiate annually on the basis of expenditures and enrollment so that the amount of state aid now is dependent on the negotiating and lobbying ability of a particular school.

> *We do not feel that tax support for medical schools – or any other schools, for that matter – should lack uniformity and be dependent upon the political power of the school and its graduates.*

One way of overcoming the objection to educating out-of-state residents with Pennsylvania tax monies would be to restrict the per student financial incentive wholly or in part to Pennsylvania residents. The degree of financial support also could be linked to increased physician production by taking the average enrollment at each of the medical schools for the five-year period ending in 1967 and providing the highest per student support for enrollments above that average number.

Physician Distribution

Much of the real gap in the availability of medical care in Pennsylvania is due to a less than optimum distribution of practicing physicians rather than to a shortage of physicians although the latter will increase, even if bold steps are taken immediately. The maldistribution is largely the result of individual physician preferences for practice in or near major urban centers that offer certain cultural, educational and social advantages. We know of no voluntary way to correct immediately this maldistribution short of the "miracle" over-night production of many more physicians.

> *The Pennsylvania Medical Society proposes the use of an already established but inadequately developed mechanism – practice in a place where medical manpower is needed as an alternative to military service.*

If practice in places of need was offered as a year-for-year military service alternative to the newly licensed physicians, we hope that the medical coverage problem of a significant number of Pennsylvania communities could be solved. A physician who sets up a practice in a community for two or three years may establish ties and loyalties to that community which cause him to remain beyond his required service and, hopefully, on a permanent basis.

Since the mechanism for such a program already exists on the federal level, we hope that Pennsylvania government would provide whatever impetus is required to have the program serve the greatest needs. Officials of the Pennsylvania Medical Society would be glad to meet with governmental leaders to work out the specific details of the operation of an optimum program in this area.

Aid For Students

Medical students from rural communities have a greater tendency to practice in rural areas than do their city-bred brothers and for this reason, there should be a greater incentive to enroll rural residents in health profession fields. Any increased enrollment is going to require that students have adequate loan and scholarship funds to allow them to meet their direct costs of their education and perhaps such funds can be made more readily available to rural students than to urban students. Unfortunately, there is little statistical support for the often-heard contention that students from ghetto areas have a greater-than-average tendency to practice in ghetto communities and the availability of adequate

Professional Liability Insurance Problems Barrier to Use of Physician Assistants

medical manpower in such areas undoubtedly requires other than a financial solution.

There is statistical evidence that both rural residents and ghetto area residents have a greater-than-average tendency to enter family practice and this in itself is sufficient reason for medical schools to enroll more such persons and for government to insure that more such persons have access to medical education. The Pennsylvania Medical Society supports any practical method that will increase the number of physicians who become family practitioners. The need for them is great and the medical society has been experimenting in the development of a plan whereby a portion of the more than $100,000 it provides annually in education support might be devoted to a loan forgiveness program for physicians who choose family practice in communities with a proven need. However, a significant portion of the public is oriented toward seeking the services of medical specialists and the decrease in family practitioners is due in part to this public orientation.

However, even if government immediately makes significant increases in its per student financial support and medical schools respond with major enrollment increases, there would be at least a temporary shortage of physicians that threatens to become acute in another three or four years in Pennsylvania and elsewhere. If medical school enrollments can be sharply and immediately increased, this shortage could be a temporary one that exists only until the increased enrollments turn out more practicing physicians - a goal that cannot be reached until the latter part of the current decade.

Physician Assistant

In whatever interim shall exist until physician manpower is increased sufficiently, a health professional with a level of training somewhere between that of a registered nurse and a physician may have to come into being to provide at least a certain minimum level of care that once was the exclusive domain of the physician. There are two possible sources for such health manpower: the highly trained military corpsmen who complete their military service and registered nurses. With proper legislative action and the establishment of specific, intensive training courses, this "physician assistant" undoubtedly would be capable of carrying out a significant degree of responsibility that heretofore has been considered the exclusive domain of the physician. Currently, when the medical corpsman returns to civilian life, there is no civilian counterpart to the job that he has been trained to do in the service and many of them largely are wasted as hospital orderlies and minor technicians. There is even some evidence to suggest that military leaders have been discouraging the development of civilian positions to use medical corpsmen effectively in the hope that the lack of such positions will be an incentive for the corpsmen to re-enlist and become career servicemen.

In the case of the registered nurse, we are aware that preparing a number of them to carry out responsibilities that may come close to those of a physician will worsen the registered nurse shortage but we consider the practice of personnel at the highest possible level of competence as the optimum use of such personnel.

> *However, the establishment of physician assistants depends on factors beyond the establishment of training and/or licensing criteria.*
>
> *It depends on some sort of legislative relief in the professional liability insurance field. Otherwise, the increased threat of economic ruin from medical malpractice suits will make it impossible for the private physician to experiment in the use of physician assistants.*

With adequate legal safeguards for all persons concerned, physician assistants might man satellite offices in locations that are miles removed from the physician with nothing more than direct communications between the assistant and the physician, plus periodic physician visits.

> *If the physician is to continue to be held legally responsible for the actions of every member of the health care team, an already critical problem with professional liability insurance becomes a problem that is virtually impossible to meet.*

Experimentally – but at a legal risk so great as to make it unworkable on a wide scale – the physician assistant concept is being tried in several other states.

Professional Liability

Even without the physician assistant addition to the problem, the Pennsylvania Medical Society is extremely and increasingly concerned over this medical/legal phenomenon. The rising number of malpractice suits is forcing physicians to practice what may be termed "defensive or legal medicine" and to view each patient as a potential malpractice claimant. In testimony presented to the Subcommittee on Executive Reorganization of the United States Senate, Eli P. Bernzweig, Esq., Special Assistant for Malpractice Research and Prevention in the U. S. Department of Health, Education, and Welfare, testified in part as follows:

"While their overall effect may not yet be known, it is becoming increasingly clear that the rising number of malpractice claims is significantly affecting the entire health care delivery system. In one way or another, they are affecting the cost of health care, the quality of health care, the attitudes of the public toward physicians and nurses, the prescribing practices of physicians, the cost and availability of malpractice insurance, the utilization rates of hospitals, trial techniques in malpractice cases, approaches to medical/legal education and numerous other consequences."

Professional liability insurance premiums of $10,000 annually exist in some cases in Pennsylvania and some physicians, because of their age or the type of practice in which they are involved, have found it virgually impossible to obtain malpractice insurance at any cost. Yet, it is foolhardy in the extreme to practice medicine in today's climate without malpractice insurance.

The Pennsylvania Medical Society compliments those who have taken cognizance of this vital problem by having the State Insurance Department study the matter. The Insurance Commissioner and his staff have called together representatives of the medical, legal and insurance communities to discuss the availability of malpractice insurance and to explore the problem in general.

> *We therefore urge you to continue to encourage all practical legislative steps to alleviate the vital medical malpractice insurance problem.*

Allied Personnel

The need for increases in health care personnel is not limited to physicians and the use of physician assistants but is almost universal in all health care fields.

> *The Pennsylvania Medical Society fully supports expanding all of the allied health professions to assist in the delivery of health care.*

If there are insurmountable barriers to the use of medical corpsmen as physician assistants, there should be no insurmountable barriers to their use as surgical technicians; orthopedic, pediatric or laboratory assistants; or any of a variety of any other roles for which they already have received the basic training. To accomplish this, however, changes must be made in the licensing laws and there must be established standard educational requirements in curricula content.

> *We stand ready to assist in the development of such specifics.*

Another source of health manpower can come from the vocational/technical schools newly established in the Commonwealth. Community colleges are another source – a source that can be expanded – of health manpower.

Health Education

Inexorably tied to the shortage and maldistribution of health care personnel and the motivation of individuals who seek care that is available, is the quality and amount of health education in the public schools of Pennsylvania. The problems of the decade ahead shout out for more and better quality health education in our schools – education that will equip our residents for the greater degree of proper health awareness that will be required of them as a direct result of the health manpower shortage. Sophistication in matters of health and nutrition also is a requirement if we are to close the gap between motivation and the health care that is available.

In the past, public school health education presented a minimum amount of factual knowledge in some areas but, however sincere, it has been inadequate in serving young people in their need to interpret and resolve the health problems of a complex world. Traditionally, man has been concerned with the inner workings of his physical and mental being and with his environment and the premise has been that physical and mental health is an end in itself. An understanding of man's biological problems, the means to physical and mental health, the nature of diseases and the signs and symptoms suggesting ill health are a vital part of the understanding of everyone. However, physical and mental health is in itself only a means to an end. Man cannot be concerned with his physical being, separate from his environment, but must be concerned with the relationship between the two. The concept of total health is more than just freedom from disease. It is an understanding of a sound mind and body in relationship to all that surrounds it and the appreciation of one's potential and individual pursuits so as to permit expression of an individual's creativity and to permit the dignity and satisfaction that can come only through the giving of one's self to a goal that exceeds self. Total health also is a function of our total environment. To strive for ideal health goals requires coordinated programs aimed at children and their families as nothing more than elements – however significant – of their total environment, and it also involves new understanding on the part of teachers and school administrators.

> *To this end, which is both philosophical and practical – the Pennsylvania Medical Society supports and recommends full implementation of the Conceptual Guidelines for School Health Programs in Pennsylvania, prepared by the Pennsylvania Department of Education this year.*

This guide attempts to present a program that will assist in developing both new and old concepts and objectives, the needed resources to enforce these concepts and objectives and, hopefully, to be of practical assistance in the development of an individual cognizant of good health practices, of his own human dignity and of the dignity of every other man.

Mental Health Needs

Mental Health

Since the passage and initial implementation of the Comprehensive Mental Health, Mental Retardation Act of 1966, there has been an expansion of mental health activities in Pennsylvania. However, there is an urgent need to place the unique problems of implementation in the forefront of the Commonwealth's concerns. Studies by the Pennsylvania Mental Health Association show a marked nationwide trend toward independent departments of mental health and retardation, especially among the major industrial states, with only 12 states still retaining mental health as subsidiary parts of larger departments. The size and complexity of the mental health/mental retardation program, which employs nearly one-third of all Commonwealth government employees, supports the position that it must not be submerged in any other department.

> *The Pennsylvania Medical Society recommends that a separate Department of Mental Health/Mental Retardation be established under the direction of a qualified psychiatrist. It further recommends that, if this is impossible, an acceptable alternative to a separate department would be an umbrella-type concept department of human services with separate*

and equal offices for health, welfare and mental health.

Since the passage of the mental health/mental retardation act, certain restrictions have been imposed on commitment procedures. Because of these restrictions, urgently needed treatment in many cases has been delayed to the danger point and undue hardships have been placed on the families, physicians, hospitals and even the public. These delays, which involve cumbersome court procedures, place an undue burden on families or general hospitals to keep mentally disturbed patients until the court authorizes commitment to a suitable institution. Comprehensive mental health centers, hospitals and other agencies charged or dedicated to assisting the mentally ill are increasingly unable to fulfill their obligations because of the legal restrictions.

The Pennsylvania Medical Society feels that it is essential that there be a clarification of the delaying legal problem which has arisen – specifically, the question of whether or not institutional commitment without court proceedings is an infringement of the individual rights of a patient who may protest the commitment procedures.

The Pennsylvania Medical Society agrees that the rights of the individual should not be abridged but it also feels that the current rulings are abridging society's right to reasonable protection from the acts of persons medically judged to be mentally in need of institutional care. The balance between individual and public rights undoubtedly is a delicate one but it would seem reasonable to the Pennsylvania Medical Society that some means be found to erase the delays that are now sometimes dangerous to both the patient and the public.

Consolidated Services

Under existing practices in state government, the administration of a variety of health services rests in a number of different major departments without sufficient coordination – a condition that can be resolved only through the logical consolidation of the now scattered concerns under a single department. As examples, state-owned hospitals are the responsibility of the Department of Public Welfare as is the administration of the Medical Assistance Program, rehabilitation health services are a responsibility of the Department of Labor and Industry, etc. We feel that the most logical step would be to place these and all other health services under the Department of Health so that they may have the professional guidance essential to the efficient accomplishment of their purposes. We also have long advocated that the secretaryship of the Department of Health should continue to be a career appointment of the best qualified physician, completely removed from political considerations.

For the most effective use of tax dollars, we recommend the transfer to the Department of Health of all health and medical programs currently being administered by other state government departments.

Along with the desire for coordination of all health activities is our concern that these programs and other related state programs be well coordinated, recognizing that ideal coordination frequently involves local or regional level decisions.

We therefore endorse the concept of the decentralization of health and welfare services which might be accomplished by granting greater local or regional authority for decision making and by developing a system that will provide better coordination in delivering these services at the local or regional level, with the understanding that policy making and operating authority in such a reorganization should remain at the state level.

Medical Assistance

Pennsylvania's Medical Assistance Program (the Commonwealth's implementation of the Title XIX Medicaid Program) has several shortcomings that are posing problems for the people that it would serve and for the physicians who provide that service. With the periodic release of the names of physicians who annually receive $25,000 or more in payments under the Medical Assistance Program, the impression is created that it is financially rewarding for a physician to treat medical assistance recipients. This is a disservice to the physician and to the public and, particularly, to the poor who are led to believe that physicians are being fully reimbursed for services to them when, in fact, the patients remain dependent on physicians' continued willingness to contribute time to them without full reimbursement.

The Pennsylvania Medical Society is aware that this connotation to the publicity is discouraging physicians from caring for the needy because the reward for the financial sacrifice involved has been criticism and innuendo of wrong doing. In most cases, the financial reimbursement to physicians under the Medical Assistance Program has been less than half of usual fees and thus the dollars paid invariably represent outstanding service to needy patients.

Medicaid Pay Reflects M. D. Service to Needy

The Pennsylvania Medical Society urges the Commonwealth of Pennsylvania to contract with Blue Cross and Blue Shield to underwrite the entire program, which would have the effect of making each medical assistance recipient a card-carrying Blue Cross-Blue Shield subscriber on the same basis as approximately five million other subscribers in the state.

This would be a major step in removing any "medical assistance stigma" by making the medical assistance recipient undistinguishable from other subscribers. This step also would bring about much needed improvement in the administration of the program which, to date, has been woefully deficient in the eyes of most of the persons and agencies involved. Even though Blue Cross handles the entire program for hospitalization and Blue Shield administers the in-hospital physician benefits, there are still many problems created by having the Welfare Department deeply involved in making final determinations for eligibility of payments. The Welfare Department has been reluctant so far to use the tested, long-standing review mechanism of the Pennsylvania Medical Society and, instead, has created its own review mechanism within the department. This could be phased out if Blue Cross and Blue Shield were to underwrite the program because the "Blues" would be using the utilization and review mechanisms that have long been established by the medical profession.

> *The Pennsylvania Medical Society also feels that physicians who care for medical assistance recipients should be reimbursed on the basis of usual, customary and reasonable fees.*

At this point, the Medical Assistance Program has been understaffed and under-funded and depends upon the willingness of physicians to perform services at little or no cost in order to avoid the paper work involved. The quality of care is at stake. The payment of usual, customary and reasonable charges would better allow the poor to compete effectively with more affluent citizens in obtaining the health care services that they need. In the past, there has not been sufficient support for the taxation that would be required to achieve this objective and, as a result, most of the needy persons in Pennsylvania continue to be dependent upon the charitable efforts of physicians and other health care providers. Again, it has been a case of government offering services for which it is not willing to pay the market price and in so doing, requiring a disproportionate effort by physicians to meet the medical needs of those eligible under the program.

Therapeutic Abortions

The Pennsylvania Medical Society is on record as favoring legislation to permit therapeutic abortions in the Commonwealth under specified circumstances. We feel that a licensed physician is justified in terminating a pregnancy if he feels that there is substantial risk that continuance of the pregnancy would gravely impair the physical or mental health of the mother or that the child would be born with grave physical or mental defects, or that the pregnancy resulted from rape, incest or other felonious intercourse. Illicit intercourse with a girl below the age of 16 should be deemed felonious for this purpose. The medical society then feels that such justifiable abortions should be performed only in a hospital accredited by the Joint Committee on Accreditation of Hospitals or by the American Osteopath Association. The medical society supported such legislation introduced in 1967 but the legislature took no action.

> *Accordingly, we recommend endorsement of the need for a thorough study and revision of the Commonwealth's archaic abortion law.*

Chiropractic

With our previous discussions of the shortage of medical manpower, it should be obvious that the medical profession would welcome the assistance of any person in the health care field with adequate scientific training. Yet, despite the increasing medical manpower shortage, we are viewing with increasing alarm the activities of chiropractors whose very existence lowers the quality of scientific medical care provided to the public of the Commonwealth and whose misleading advertising we consider to be a reprehensible offense against the public.

> *We suggest that the time is long past due for you to review objectively the status of chiropractic and to require, as have several other states, an equal level of education for all persons practicing the healing arts and the endorsement by all of a high standard of ethics.*

Chiropractic proponents usually distort the Pennsylvania Medical Society position as one being motivated by economics. It is ridiculous to suppose such a medical profession motivation at a time when harried, over-worked physicians are looking for help from any qualified source in meeting health care needs.

Boards Need Support

> *At the very least, the Pennsylvania Medical Society proposes that you call for an impartial investigation of chiropractic to determine whether or not such practitioners should continue to be licensed in this Commonwealth.*

Licensing Boards

The State Board of Medical Education and Licensure, like the 16 other boards under the jurisdiction of the Department of State, continues to function without adequate financial and personnel support. Most of the money which is collected by these boards is returned to the General Fund and parceled out, only in part, back to the boards. Over the years, this has resulted in a gradual administrative deterioration of the boards. Most lack adequate administrative personnel and quarters; members of the board are inadequately reimbursed for their services. In many instances, vacancies in these boards have not been filled in accordance with the law and we would recommend you endorse not only the adequate financing and staffing of these boards but all of the general support needed for them to achieve their maximum effectiveness. Because of other developments that have and are taking place, the support need not drastically increase the amount of funding required. We refer to the increased cooperation between the osteopathic and medical professions, a cooperation that recognizes our common goals and the common purpose of the scientific training provided. Both doctors of osteopathy and doctors of medicine are licensed to practice medicine and surgery in the Commonwealth. Their licenses are identical, their training has a common goal and we favor the abolition of all artificial barriers that may stand in the way of complete cooperation. As an example of the medical society attitude and policy, we recently opened up our membership to fully licensed osteopathic physicians and are working to secure medical hospital staff privileges for all qualified practitioners.

> *We recommend that the State Board of Medical*

Education and Licensure and the State Board of Osteopathic Examiners be merged and that the savings which result be used to defray in part the cost of providing the financing and staffing that the merged board would deserve. Until such time as this merger may be achieved, we recommend complete support for the separate boards in quantity sufficient for them to achieve maximum effectiveness.

Emergency Health Services

There is a great need for the development and coordination of adequate emergency health services in Pennsylvania. It is essential that there be brought together for planning, implementation and assessment of programs the various disciplines of medicine, police, ambulance services, communications, public health and other appropriate groups.

We recommend that emergency medical and health services in the Commonwealth be inventoried and a plan for improvement developed and implemented.

We feel that there should be developed prototype emergency programs in a coordinated state, regional and community level. We recommend continued training for ambulance attendants and emergency department personnel and the establishment of legal registration of ambulance companies with concurrent minimal standards. We stand ready to provide guidance in the development of precise programs.

Aging Need Information

Information For Aging

The increasing number of aging persons and the complexity of their needs has resulted in a multiplicity of private and governmental resources which we feel are greatly in need of coordination for efficiency, economy and effectiveness. There is no one place where an aging person now can call to find out the total services available to him. The aging frequently are in a position that makes it difficult for them to seek and obtain the information that they need and we hope that there could be established a toll-free number – perhaps on a community or even county basis– through which complete information would be made available. Such telephone centers would have to be manned by individuals who have access to all aspects of aging services – hospitals, nursing homes, custodial facilities, pensions, legal assistance, extended care facilities, geriatrics clinics, rehabilitation, occupational therapy and many other forms of services for the aging.

We recommend that programs for the aging be coordinated and that information services be established on the local level to provide the aging with the data about the programs.

Pollution

For more than a decade, the Pennsylvania Medical Society has been expressing its extreme concern with the deterioration of our environment. Our physician-members are concerned both as physicians and as citizens. As citizens, they expect the environment in which they live to be acceptable. As physicians, they are concerned by the threat to health that is posed by environmental contaminants. As physicians, they are committed to seek changes whenever the quality of life becomes disagreeable. They have a clear directive to intervene when it becomes unhealthful. We continue to recommend that Pennsylvania allocate sufficient funds to reverse the environmental trends that have been taking place. Stringent laws have been passed in some areas of the state and we urge that they be made statewide and that they be enforced strictly and fairly. In addition, we feel that there is a need for a major effort in both manpower and finances to research the effects of pollutants on the health of man. Much is already known about the direct cause and effect relationship of some specific pollutants but we need to know much more if our laws and regulations to control environmental contamination are to achieve maximum effectiveness and serve the greatest common good. There is no question about the adverse effect on health of environmental contamination; the only question concerns the degree of that effect.

We urge complete support for all practical measures to control environmental contamination and for intensified research on how pollutants affect the health of man.

Anatomical Gift Act

The Pennsylvania Legislature passed and made effective as of January 1, 1970, a slightly modified version of the Uniform Anatomical Gift Act – a forward-looking step that recognizes the growing amount of good that individuals can accomplish by making "the ultimate gift," the donation of their bodies and/or body parts after death. Corneas can be used to restore sight in some blind persons; skin can be used to save burn victims; bones and cartilage can restore a skeletal structure destroyed by accident or disease; kidneys can be transplanted to prolong life. The list of body parts that is or may be useful for others grows almost daily with the burgeoning medical developments that are taking place in this field. Although heart transplants may seem most dramatic to the public, developments considered to be far more useful are taking place in the transplantation of lungs and a variety of other body organs. Bone marrow itself can be transplanted to fight the ravages of certain blood diseases. A longer, more productive life for many persons today will depend on the understanding and commitment of those who choose to serve others after death by donating their bodies and/or body parts. Even the production of more well-trained physicians depends upon the availability of bodies for scientific teaching and study – an availability which already is far less in Pennsylvania than the recognized minimums for optimum training.

With the passage of the Uniform Anatomical Gift Act in Pennsylvania, those who choose to make the ultimate gift after death need only carry in their possession a witnessed card declaring their intent.

However, no agency exists to coordinate the distribution of these badly needed gifts and the greatest good to the greatest number of persons depends upon the speedy development of such a coordinating agency.

There does exist the Anatomical Board of the State of Pennsylvania but it was divorced from the Pennsylvania Department of Health some years ago and stands alone as a self-supporting agency whose only function is to distribute bodies for medical, dental and osteopathic school teaching purposes. It has no state funding and its expenses are met on a pro-rated basis by the schools that it serves. It is in no position – financially or by its legislatively structured purpose – to serve as the coordinator and distributor of the body parts that should be one of the major benefits of the new gift legislation.

> *Therefore, the Pennsylvania Medical Society suggests that for the greatest public good you should actively support steps necessary to establish a redefined Anatomical Board as an agency of the Department of Health and that funds be provided to it for the public education, registration and distribution of whole bodies and body parts. We stand ready to assist in the development of this specific recommendation.*

Medical Examiner System

One of the most important projects in which the Pennsylvania Medical Society has embarked in recent years is the study of the coroner system in the state and the development of a model statewide medical examiner system. At the recent Constitutional Convention, Pennsylvania was fortunate in having removed from the language of the constitution the office of coroner as a constitutional officer. The way now is clear for the creation of a statewide medical examiner system.

'Medical Care Is A Service, Not A Product'

Our study of the coroner system in the state was made by the Institute of Public Administration of the Pennsylvania State University and it shows very clearly the faults with the outmoded coroners' offices. The philosophy behind the medical examiner is far more realistic in this day and age. Underlying the philosophy attending the transfer to a medical examiner system is the proposition that if the proposed activities of the medical examiner are in the public interest, means should be found to implement such proposals. The public interest thus should become the determining factor. Whereas the coroner seeks to limit his jurisdiction and to hold post-mortem examinations only in cases where it is absolutely necessary, the examiner would not share this attitude. Although the examiner will not seek to extend his activities on the police side of the investigation, the sought-after extensions will be in the public health area protecting the well being of the entire community. In the United States, the science of medicine participates less effectively in the administration of justice than it does in any comparable country in the world. The ineffectual manner in which medical knowledge and skill are utilized in the administration of justice in many jurisdictions of the United States undoubtedly predisposes to failure to recogn murders; the unjust accusation of innocent persons; th improper evaluation of medical evidence bearing on the circumstances in which fatal injuries were incurred; failure to acquire medical evidence which would be useful in the apprehension of criminals; failure to acquire medical evidence essential to the administration of civil justice; ignorance of certain otherwise preventable hazards to public health; and impairment of value of vital statistics.

> *We recommend complete support of the establishment of a statewide medical examiners system in Pennsylvania.*

Local Health Units

Although we discussed previously our recommendation that all health services be consolidated under the Department of Health and that these be implemented on the most local level consistent with good administrative practices, we feel the need to re-emphasize our support of local health units. We have always supported the concept that the delivery of public health services should be at the most effective level – at the county or other appropriate district level. To this point, we supported the passage in 1951 of Act No. 315 which enabled counties, with the help of the state, to set up county health units. Surveys of the delivery of public health services in the Commonwealth, including those made by the American Public Health Association and the Johns Hopkins School of Medicine, all have urged the return of the administration of public health to local communities. These units should provide all of the ordinary public health services except those specifically assigned to the state by law or certain highly technical functions that best can be centrally provided. They would be part of local government – home rule – but be subsidized by the state which also would provide the assistance necessary to assure the maintenance of acceptable standards of performance.

> *We urge complete support of the establishment of local health units in every possible area of the state.*

Health Care Costs

Any discussion of health care needs in Pennsylvania must deal with the cost of meeting those needs. The cost is high and will continue to grow higher, but except in the case of hospitalization costs, the increases are not generally higher than those that have taken place for other services. Frequently, the increase in the cost of medical care is compared to the increase in the general cost of living but the provision of medical care is a service, not a product.

The cost of all services, excluding rent, has increased 30% over the past five years and physicians' fees have increased about the same amount. For instance, payments to physicians under the Medical Assistance Program in Pennsylvania constitute only about 11% of the cost of that program and with the Medicare Program for the aged, payments to physicians represent only about 23% of the cost.

It is only in the field of hospitalization that the cost would appear to be running inordinately high – an increase of 86% in the past five years. However, the major portion of the cost of hospitalization is wages which constitute more than two-thirds of the total and the wages of hospital workers have been increasing sharply. These wage increases have been justified. They have been justified because for decades the hospital workers was receiving far less than the going rate for similar skills in other employment settings. Now, unions have been organizing hospital workers and have been precipitating strikes for higher wages. This movement will continue for some years and will continue to increase the cost of hospitalization.

Then, too, the service that a hospital dollar or medical care dollar buys today is not the same service that was purchased even five years ago. Many of the life-saving and life-prolonging practices in today's modern hospitals have come into being in only recent years and the increased sophistication in treatment, machines and personnel unfortunately carries an increased price tag.

In addition to the major impact of health manpower wage increases, there is the direct correlation we have mentioned between the quality of care provided and the cost of providing it. While it is our desire to keep health and medical care expenditures at a level that all can afford, we have an even greater obligation to assure that current and coming medical care advances are made available to the public. To those who feel that government control is a way out of increased costs, there are several object lessons already available: there is no indication that federal or state-owned hospitals assure any improvement in the delivery or quality of medical care or in the administrative procedures. For example, the Veterans Administration and the hospitals it operates have demonstrated less concern about the appropriateness of hospital stays than have voluntary hospitals and their medical staffs.

Costs Vs. Expenditures

The Pennsylvania Medical Society is a national pioneer in the establishment and supervision of expenditure controls through committees who review the appropriateness of hospital admissions and lengths of stays. First of all, these utilization committees determine whether or not the hospital admission was justified and they then review the length of hospital stays to make sure the patient was not hospitalized longer – or less – than his condition would indicate. The same sort of review system operates with third parties in assessment of the appropriateness of physicians' services and charges. This "peer review" system in Pennsylvania is considered to be one of the most effective in the nation and is an expression of our commitment to control unnecessary expenditures in the health and medical care field.

We need to differentiate between health care costs and health care expenditures. Controls short of complete nationalization of the entire health care field will not control costs which are an inescapable product of wages and sophisticated medical care advances. A degree of control can be exerted over expenditures. For example, the increasing number of professional liability suits has brought about a direct and very significant increase in the cost of operating a medical practice and the cost of operating a hospital.

Guidance in the quantity, quality and types of health care facilities of the Commonwealth is needed if we are to get the maximum benefits of the dollars spent for this purpose. Authorization for the use of Hill-Burton Funds has not always been uniform in Pennsylvania. We feel that the Pennsylvania Department of Public Welfare does not support the allocation of funds for hospitals that do not meet the standards of the Joint Committee on Accreditation of Hospitals or of the American Osteopathic Association. We also feel that the same criteria should apply to those hospitals eligible for licensing by the Department of Public Welfare. The existing multiplicity of standards for the allocation of Hill-Burton Funds cannot help but contribute to inequality in the care provided and we feel that minimum standards should be established and applied uniformly throughout the Commonwealth whether the hospitals be community ones or state-operated ones.

Despite the existence of health facility planning agencies in some areas of the state, and despite the existence of the Comprehensive Health Planning Law, there continues to be unnecessary duplication of costly hospital services in many areas.

When one notes the growth in the number of proprietary hospitals and the fact that most of them are showing a profit, it is all too easy to assume that many general hospitals are not operated as efficiently as are the proprietary hospitals. This may be true to a degree, but a major portion of such inefficiency can be attributed to standby services now considered essential to the community – services that proprietary hospitals can choose to avoid.

State reimbursement for hospital services provided to medical assistance recipients in many instances does not reflect the actual cost of providing those services and the difference must be passed along in increased hospitalization charges to non-assistance patients. Again, it would seem logical for the state to reimburse hospitals for the full cost of providing the services that it has pledged. We feel it would be equally logical for hospitalization third parties to provide financial incentives for efficiency in hospital operations.

There is still a significant number of non-paying patients cared for in the average general hospital and this deficit again must be passed along to others. Perhaps the time has come when a minimum level of hospitalization and medical insurance should be required of every resident of the state in much the same manner as workmen's compensation insurance is required.

> *We recommend legislation that would require all employed persons to have coverage no less extensive than the minimal Blue Cross-Blue Shield Plans.*

However, the cost picture for hospitalization and the other elements of health and medical care is so extremely complicated as to defy any quick, simple solution. A total discussion of the causes and possible amelioration is far beyond the scope of this document.

> *We do pledge to cooperate with all concerned parties in the development of any steps to control health care costs that are in the best interest of the public that we both are dedicated to serve.*

PENNSYLVANIA MEDICINE cancer forum

The Cancer Detection Examination

WHAT IS A CANCER DETECTION EXAMINATION?

Simply stated, it is a comprehensive physical examination including certain laboratory studies. Other common diseases are looked for at the same time, of course, and the emphasis is on health maintenance. Such examinations are not new nor must they be performed in clinics or hospitals. They can be easily done in the private office. Two points should be emphasized: (1) the examination should be a real physical examination systematically performed and the examination should be a part of a continuing cancer control program. This means the physician will reexamine his patients at stated intervals and will maintain an effective recall system to accomplish this.

The advantages are two fold. Such a detection program keeps the physician alert and suspicious of disease and the patient likewise is encouraged to maintain an interested concern for health maintenance.

The Cancer detection *examination always starts with the preparation of a routine patient history.*

WHAT SHOULD SUCH AN EXAMINATION INCLUDE?

There is no common agreement on all points and each physician will develop his own procedure. Certain essentials we can all agree on. The initial visit should include a complete history including family diseases, social history, and eating, drinking and smoking habits. Any present symptoms are fully developed. Physical inspection is of the "top to toe" variety. Fundoscopic and otoscopic examination is done. The mouth is inspected with the gloved finger after removal of dentures. Mirror laryngoscopy takes only a minute more. Nodes are palpated as the examination descends. Lungs are examined, blood pressure recorded and the heart examined. The female breasts are studied followed by abdominal palpation. Reflexes are checked and genito-rectal examination done. A Pap smear is done on all females.

WHAT OTHER LABORATORY STUDIES ARE DONE?

Most physicians include a complete blood count with differential sedimentation rate, serum cholesterol, blood sugar and complete urinalysis. Many include chest x-ray and electrocardiogram. As you can see, such an examination covers not only cancer but the vascular and metabolic diseases as well.

HOW OFTEN SHOULD IT BE DONE?

The comprehensive examination should be repeated annually. All women over 35 years should have, in addition, a breast and pelvic examination every six months. Men over age 50 should have a proctosigmoidoscopy included in their examination procedure.

IS IT WORTH ALL THE EFFORT AND EXPENSE?

The experience of those clinics and physicians who pursue such a program indicate that early cancer as well as other important diseases are found more frequently than in the practice of "crisis medicine" where the emphasis is on therapy after disease becomes overt.

CANCER FORUM – presented cooperatively by the PMS Council on Education and Science, The Pennsylvania and Philadelphia Divisions of the American Cancer Society, and the Cancer Control Section, Pennsylvania Department of Health. The Cancer Forum is edited by Roland A. Loeb, M.D., Lancaster.

PENNSYLVANIA
MEDICINE cardiovascular briefs

Curable Forms of Hypertension

Alfred M. Sellers, M.D., associate professor of Medicine, Hospital of the University of Pennsylvania, School of Medicine, Philadelphia, is questioned by William G. Leaman, Jr., M.D.

What causes of hypertension may be considered surgically curable?

In 10 to 15 per cent of patients with hypertension, specific treatment of coarctation of the aorta, pheochromocytoma, Cushing's syndrome, primary aldosteronism, renal artery stenosis, and occasional unilateral pyelonephritis may result in complete cure. These diagnoses should be considered in the evaluation of all hypertensive patients before embarking on a long-term course of non-specific medical treatment.

How does the physician diagnose pheochromocytoma?

As with all rare disease, the physician needs a high index of suspicion. He should be alerted to complaints of episodic hypertension, excessive, generalized sweating and severe headaches. Diabetes, postural hypotension, vasomotor lability, and a hypermetabolic state may be present. The diagnosis is confirmed by finding increased urinary catecholamines, VMA, metanephrine and normetanephrine. At least two positive tests should be obtained before advising surgical exploration. Regitine and Histamine tests are less reliable but may be used as adjuncts. Pre-operative treatment with phenoxybenzamine (Dibenzyline) and propranolol (Inderal) is important for blood pressure control during and after surgery.

How common is primary aldosteronism?

This disease is seen more frequently than pheochromacytoma but less than renal artery stenosis. These adrenal cortical adenomas are rarely malignant. The diagnosis is suggested by hypokalemia and diabetes in a patient with benign hypertension, mild degrees of retinopathy and no edema. Low plasma renin and elevated urinary aldosterone confirm the diagnosis. Marked hypokalemia developing after small doses of oral diuretics should make one suspect primary aldosteronism. Treatment with spironolactome, 400 mg. daily, for three to four weeks may help separate primary from secondary hyperaldosteronism. If blood pressure and serum potassium return to normal, this is good evidence for primary aldosteronism. If no anti-hypertensive response occurs, suspect secondary hyperaldosteronism. Other office diagnostic procedures include: (1) Salt loading with 2 Gm. sodium chloride t.i.d. for three to four days. If the patient develops a low potassium and his serum sodium remains normal or high, this is presumptive evidence for primary aldosteronism. If serum sodium and potassium remain normal, primary aldosteronism is unlikely. (2) Measure 24-hour urine potassium while on a normal diet. Suspect primary aldosteronism if excretion of greater than 40 mEq. potassium occurs in spite of a low serum potassium. Steroids, diuretics, contraceptive pills, and licorice may mimic certain aspects of the syndrome of hyperaldosteronism. Relapse of hypertension following adrenalectomy occurs more commonly in those with adrenal hyperplasia than with solitary adreanl cortical adenoma.

When should the internist suspect renal artery stenosis?

Most patients should be hospitalized for investigation of renal artery stenosis if they present the following criteria: sudden onset of hypertension, particularly if under age 35, a change from benign to accelerated hypertension, sudden loss of blood pressure response to medical treatment, onset of hypertension following sudden flank pain, flank bruit, hypokalemia, and an abnormal rapid sequence urogram.

What are the risks of renal arteriography?

When performed by an experienced team, the Seldinger technic or retrograde renal arteriography causes few complications. Bleeding associated with withdrawal of the catheter may be prevented, in part, by reduction of blood pressure prior to performance of the study.

How can one best determine that repair of renal artery stenosis will benefit the patient?

No single study is 100 per cent reliable in determining the functional nature of renal arterial stenosis. Split renal function studies may be positive in some patients who do not respond to surgery and negative in some who do. Differential renal vein renin or angiotensin excretion currently is the most reliable test available, offering an 85 per cent possibility of predicting correctly a good surgical response. Reconstructive vascular surgery is preferred to nephrectomy in order to preserve renal functioning tissue. Best results have been seen among the young (under 40 years) patients with recent onset of hypertension and fibrous dysplasia of the renal artery.

What can be done for patients with a small kidney suggesting unilateral hyelonephritis?

Long duration of hypertension and the probable presence of bilateral intrarenal disease have limited the cure of hypertension by nephrectomy to 25 per cent of these patients.

William G. Leaman, Jr., M.D., edited this brief for the Council on Education and Science, in cooperation with the Pennsylvania Heart Association.

PROTEIN CONTENT / 7 oz. Serving*

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Cures Trichomoniasis in Both Women and Men

About half of all husbands of infected women harbor *Trichomonas vaginalis*.*

Few of these men have symptoms. Even so, all are capable of perpetuating the infection and rendering treatment of a woman alone futile.

Only a systemically active medication like Flagyl is capable of reaching the hidden reservoirs of infection in the genitourinary tracts of both men and women.

Only Flagyl has been able to achieve rates of cure consistently above 90 per cent and often up to 100 per cent in trichomonal infections in both men and women.

Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture.

Contraindications: Evidence of or a history of blood dyscrasia, active organic disease of the central nervous system and the first trimester of pregnancy.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. There is no accepted proof that Flagyl is effective against other organisms and it should not be used in the treatment of other conditions. Exacerbation of moniliasis may occur.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, drowsiness, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: *In the Female.* One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

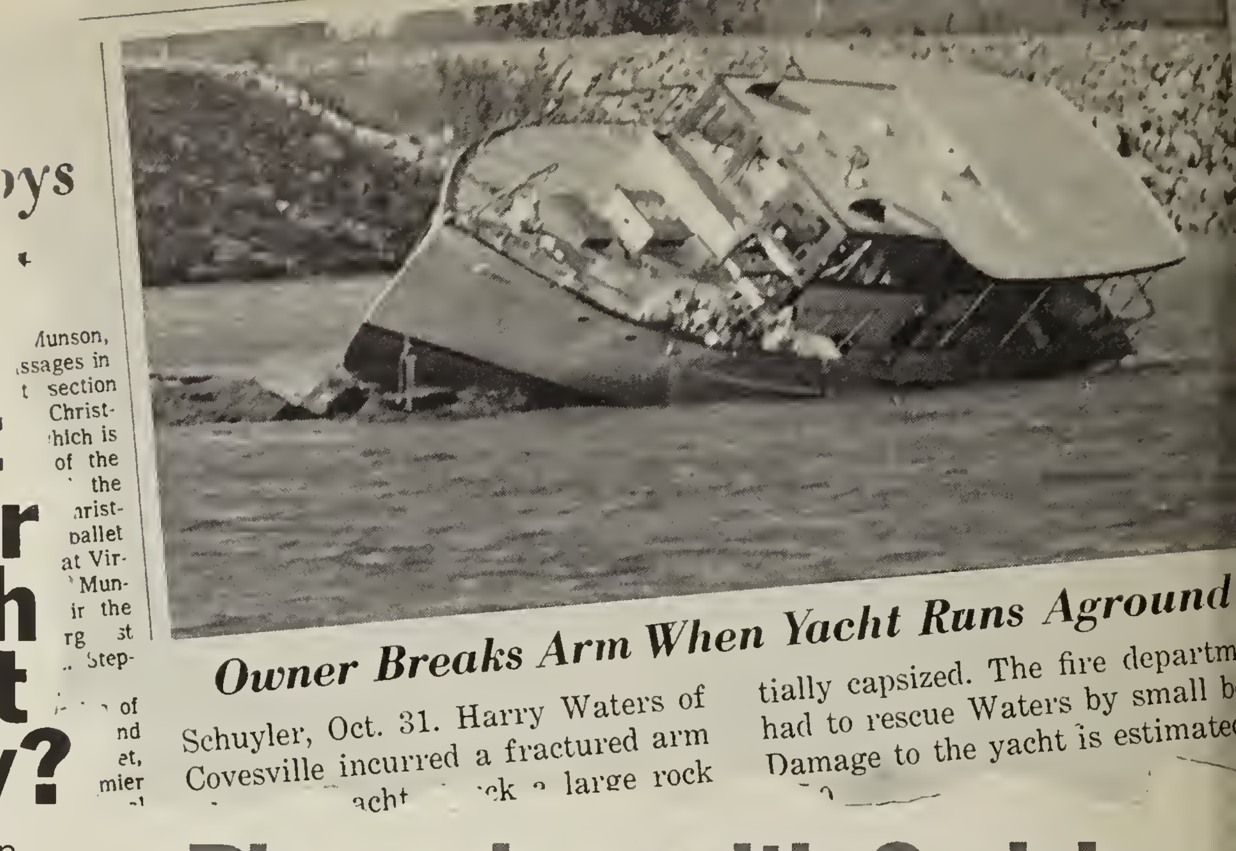
Dosage Forms:	Oral tablets . . .	250 mg.
	Vaginal inserts . .	500 mg.

*References available on request.

SEARLE
P. O. Box 5110
Chicago, Illinois 60680

942

Research in the Service of Medicine



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Owner Breaks Arm When Yacht Runs Aground

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm acht ck a large rock

tially capsized. The fire departm had to rescue Waters by small b Damage to the yacht is estimate

Hasn't the skipper had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

A. H. Robins Company,
Richmond, Va. 23220 **A·H·ROBINS**

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

What she really needs, Doctor, is a shot of penicillin.”

Maybe. Maybe not. In any case she needs something to control her sneezing, watery eyes and runny nose. And for most children over six, Novahistine® LP can be depended on to provide fast relief from summer colds and allergy. These continuous-release tablets have a vasoconstrictor-antihistamine formulation that begins working in minutes, then continues to provide relief for hours. A single Novahistine LP tablet, morning and evening, can keep most young patients free of symptoms all day and all night. Use with caution in individuals with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Novahistine®
LP decongestant

(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

DOW THE DOW CHEMICAL COMPANY Rx Pharmaceuticals Indianapolis

Clinical Extension of a pure Smooth Muscle Relaxant

TROCINATE®

Brand THIPHENAMIL HCl

400 mg./100 mg. S/C tablets

Trocinate relaxes all smooth muscles. Its direct action (musculotropic) does not involve the autonomic nervous system and it is not mydriatic. It is metabolized by the body and eliminated in the urine as harmless degradation products. Trocinate has a remarkable history of freedom from side-effects.

When a pure direct-acting smooth muscle relaxant is indicated, Trocinate is the drug of choice.

DIARRHEA (functional) . . . *the first 400 mg. tablet usually relieves the discomfort of diarrhea so promptly that it ceases to be a bother.*

DIVERTICULITIS—MUCOUS COLITIS . . . *the accompanying discomforts can be relieved by this direct smooth muscle relaxant.*

BLADDER SPASM . . . *relaxation is immediate. One or two tablets condition the bladder for cystoscopy in one hour.*

SPASTIC URETER . . . *the specific relaxing effect of Trocinate on the spastic ureter has been proven by animal studies and affirmed clinically. (J. Urol. 73:487-93)*

PRESCRIBING INFORMATION

WARNING: Do not give in advanced kidney or liver disease. PRECAUTIONS: Trocinate relaxes all smooth muscles. Large dosage or prolonged usage may cause feeling of weakness or can theoretically precipitate gall-bladder colic, due to relaxing the vascular and duct systems. Caution should be observed in patients with urinary bladder obstruction. DOSAGE: 400 mg. May be repeated in 4 hours. After relief, lengthen the dose frequency. (see side note)

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of Ethical Pharmaceuticals

NOTE: *The high therapeutic index of Trocinate permits its administration in dosage sufficient to relieve smooth muscle spasm promptly. 400 mg. dosage usually creates a therapeutic blood level. In reducing dosage after relief, lengthening the time between dosage rather than lessening the recommended dose is preferable. The prompt direct action allows a consciousness of the first suggestion of return of symptom . . . a guide to dose spacing and to determining when treatment is complete. A prescription for twelve or sixteen 400 mg. tablets will usually correct spasm and leave a few tablets for a reserve.*

PENNSYLVANIA MEDICINE

obituaries

○ **Indicates membership in the Pennsylvania Medical Society at time of death.**

○ **William L. Benz**, Blairsville; University of Pittsburgh Medical School, 1920; age 73; died January 30, 1970. He was a veteran of World War I, and had practiced in Blairsville since 1921. Surviving are his wife and a brother, Carl F. Benz, M.D.

○ **Patricia A. Pas Carlough**, Bloomsburg; University of Michigan School of Medicine, Ann Arbor, Mich., 1956; age 39; died January 13, 1970. She is survived by her husband William Carlough, Ph.D., of the faculty of Bloomsburg State College, two children, her father and two sisters.

○ **James K. Everhart**, St. Petersburg, Fla.; University of Pennsylvania School of Medicine, 1902; age 89; died December 3, 1969. Survivors include his wife and a son.

○ **John W. Fredette**, Pittsburgh; University of Pittsburgh Medical School, 1914; age 78; died January 26, 1970. He was an orthopedic surgeon, and practiced for fifty-five years until his retirement January 1. He was on the faculty of the University of Pittsburgh Medical School for forty-five years. He is survived by a daughter, a brother and a sister.

○ **David E. Hemphill**, Pittsburgh; University of Pittsburgh Medical School, 1914; age 82; died February 15, 1970. He was a specialist in diseases of the eye, ear, nose and throat and had practiced for fifty-five years. Several nieces and nephews survive.

○ **Robert G. Howe**, Clifton Heights; Jefferson Medical College, 1943; age 50, died January 29, 1970. He served in the Army Medical Corps during World War II. He is survived by his wife, four sons, two daughters and two brothers.

○ **Francis F. Meilicke**, Bethlehem; University of Pennsylvania School of Medicine, 1939; age 56; died January 27, 1970. He served in the Army in World War II, and was a member of the American College of Surgeons. Surviving are his wife, two daughters and a brother, Clement Meilicke, M.D.

○ **Harold S. D. Mock**, Cheswick; University of Pittsburgh Medical School, 1920; age 74; died February 1, 1970. He had practiced medicine in Cheswick for more than forty years. He is survived by his wife, a daughter and a son, David Mock, M.D.

○ **Norman C. Morgan**, Chautaqua, N. Y.; University of Colorado, Denver, Colo., 1944; age 50; died June 17, 1969. No survivors are listed.

○ **Joseph N. Plumer**, Livermore, Calif.; Temple University Medical School, 1934; age 59; died January 20, 1970. He was a member of the American College of Chest Physicians. Surviving are his wife and daughter.

○ **Leon N. Prince**, Philadelphia; Jefferson Medical College, 1933; age 63; died January 28, 1970. He was associate professor of obstetrics and gynecology at Jefferson. He was a founding fellow of the American College of Obstetrics and Gynecology and a veteran of World War II, during which he served in the Coast Guard. He is survived by his wife, two daughters, his mother, and a son, Robert L. Prince, M.D.

○ **John C. Prothero**, Jeanette; University of Pittsburgh Medical School, 1931; age 64; died February 16, 1970. He is survived by his wife, a daughter and a sister.

○ **William S. Rinker**, Philadelphia; Jefferson Medical College, 1936; age 60; died October 25, 1969. He served in the Navy during World War II. No survivors are listed.

○ **Joseph A. Scarano**, Philadelphia; Jefferson Medical College, 1928; age 68; died January 28, 1970. He specialized in diseases of the ear, nose and throat. Survivors include his wife and two sons, Joseph H. Scarano, M.D., and Victor R. Scarano, M.D.

○ **J. Parsons Schaeffer**, Paramus, N. J.; University of Pennsylvania Medical School, 1907; age 91; died February 7, 1970. He was professor of anatomy at Jefferson Medical College and was a pioneer in diabetes research. Surviving are his wife, a son, a brother and a sister.

○ **Gibson Smith**, York; University of Pennsylvania Medical School, 1914; age 80; died January 31, 1970. He was a recipient of the PMS Fifty-Year award for service in his profession. He was a past-president of the York County Medical Society. Surviving are his wife, a daughter and two sons.

○ **Elsie R. Treichler-Reedy**, Philadelphia; Woman's Medical College of Pennsylvania, 1901; age 92; died January 30, 1970. She was the widow of Hiram Reedy, M.D. There are no survivors.

○ **Charles S. Wachs**, Wyncote; Medical-Chirurgical College of Philadelphia, 1914; age 77; died February 4, 1970. He practiced obstetrics and gynecology for fifty years prior to his retirement in 1968. Surviving are his wife, a son, a daughter, three brothers and two sisters.

○ **William H. Wymard**, Pittsburgh; University of Pittsburgh Medical School, 1909; age 84; died February 21, 1970. He had been a practicing physician for more than fifty years. Survivors include his wife, four daughters and a brother.

○ **Mosan Hosein**, Yeadon; Howard University Medical School, Washington, D. C., 1920; age 73; died February 11, 1970. He had practiced medicine in Philadelphia for forty-five years. His wife, a son, three brothers and a sister survive.

○ **Joseph A. Pescatore**, Philadelphia; Georgetown University Medical School, Washington, D. C., 1930; age 64; died February 5, 1970. He was a cardiologist and an instructor at Temple University Medical School. His wife and two sons survive.

○ **Edward L. Bortz**, Philadelphia; Harvard University Medical School, 1923; age 74; died February 24, 1970. He was a past president of the AMA, the American Geriatrics Society and the Philadelphia County Medical Society. He authored more than 100 articles and several books on nutrition, metabolism and geriatrics, and has received numerous awards and honors. Surviving are his wife and a son, Walter M. Bortz, M.D., Philadelphia.

PENNSYLVANIA MEDICINE

continuing education

A list of educational opportunities offered to physicians in the interest of maintaining their competence and skill. Unless otherwise indicated, all courses are designed for physicians engaged in primary patient care.

CARDIOVASCULAR DISEASE

July 8, 1970; Pitt

C–**Cardiopulmonary Resuscitation Instructors' Training Course**; by Pa. Heart Assoc., Pitt, and Western Pa. Heart Assoc.; 8 hrs. AAGP credit approved; $15 fee. Contact Bulent Kirimli, M.D., Pitt, Scaife Hall, Pittsburgh 15213.

September 9-11, 1970; Philadelphia

C/AMA–**Mechanisms and Therapy of Cardiac Arrhythmias**; by Hahnemann and American College of Cardiology; at Marriott Motor Hotel; 8 hrs. ea. day; fee: $100 for members of Amer. College of Cardiology – $125 for nonmembers. Contact Leonard S. Dreifus, M.D., Prog. Dir., Hahnemann, 230 N. Broad St., Philadelphia 19102.

CHEST DISEASES

November 3-14, 1970 and March 1-12, 1971; Philadelphia

PG–**Postgraduate Courses in Bronchoesophagology**; at Temple. Contact Charles M. Norris, M.D., Chevalier Jackson Clinic, Temple, 3401 N. Broad St., Philadelphia 19140.

July 13-24, 1970; Philadelphia (Hahnemann)

September 28-October 9, 1970; Wilkes-Barre V.A. Hosp.

November 30-December 11, 1970; Philadelphia (Hahnemann)

O/AMA–**A Workshop in Respiratory Intensive Care**; by Greater Delaware Valley Regional Medical Program; 10 consecutive days; 8 hrs. ea. day; max. regis.–15; 80 hrs. AAGP credit applied for. Contact R. F. Johnston, M.D., Head, Sect. of Chest Diseases, Hahnemann, 230 N. Broad St., Philadelphia 19102.

GENERAL MEDICINE

June 4, 1970; Pottsville Hospital

I/AMA–**Thrombophlebitis - Incidence, Risks, Treatment** (Program of Continuing Medical Education 1st Thursday each month); by Jefferson and Penn State; 2 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut Street, Philadelphia 19107.

"CODE KEY"

C—Consecutive days
I—Intermittent
O—Circuit
PG—Postgraduate Traineeship
R—Radio
TV—Television
S—Designed for full-time specialists
AMA—AMA Accredited Institution
C E S—Council on Education and Science, Pennsylvania Medical Society
Hahnemann—Hahnemann Medical College and Hospital
Hershey—Milton S. Hershey Medical Center
Jefferson—Jefferson Medical College of Philadelphia
Penn-Grad—University of Pennsylvania, Division of Graduate Medicine
Pitt—University of Pittsburgh School of Medicine
Pitt P.H.—University of Pittsburgh Graduate School of Public Health
Penn State—Pennsylvania State University
Temple—Temple University Health Sciences Center
U. of Pa.—University of Pennsylvania School of Medicine
Woman's—Woman's Medical College of Pennsylvania

June 11, 1970; Allentown Hospital

I/AMA–**Advances in the Concepts of Chemotherapy** (Program of Continuing Medical Education - 2nd Thursday each month, 10 months); by Jefferson and Penn State; 3 hrs. AAGP credit. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

September 2, 1970-May 26, 1971; Hazleton State General Hospital

I–**Continuing Medical Education Program**; by Hazleton Branch of Luzerne Co. Med. Soc. and hospital; 1½ hrs. per day; 1 day per week; 36 weeks; 30 hrs. AAGP credit. Contact Robert L. Gunderson, M.D., Dir. of Med. Education, Hazleton State Gen. Hosp., Hazleton 18201.

September 3, 1970-June 3, 1971; Pottsville Hospital

I/AMA–**A Program of Continuing Medical Education**; by Jefferson and Penn State; first Thurs., ea. mo.; 10 mos.; 2 hrs. AAGP credit approved for ea. session. Contact John H. Killough, Ph.D., M.D., Assoc. Dean, Jefferson, 1025 Walnut St., Philadelphia 19107.

November 16-19, 1970; Lancaster

C–**Clinical Therapeutics 1970: Emergency Medicine** (1970 Scientific Assembly of PMS); by CES; at Host Farm Resort Motel. Contact Robert L. Evans, M.D., CES, Pennsylvania Medical Society, Taylor Bypass & Erford Rd., Lemoyne 17043.

INTERNAL MEDICINE

Fourth Tuesday, each month; Altoona Hospital

First Tuesday, each month; Greensburg (Westmoreland Hosp.)

First Thursday, each month; Johnstown (Conemaugh Valley Mem. Hosp.)

Second Tuesday, each month; Natrona Heights (Allegheny Valley Hosp.)

Last Monday, each month; Uniontown Hospital

First Wednesday, each month; Washington Hospital

O/I–**Diagnosis and Management of Hypertension**; by Western Pa. Regional Medical Program and Pitt; AAGP credit applied for. Contact Alvin P. Shapiro, M.D., Project Dir., 501 Flannery Bldg., 3530 Forbes Ave., Pittsburgh 15213.

June 4, 1970; Harrisburg Hospital

The Status of Viral Diseases–1970; by Harrisburg Hosp., Polyclinic Hosp., Hershey, Pa. Dept. of Health and National Communicable Disease Center; 5 hrs. AAGP credit applied for; $10 fee. Contact Thomas F. Fletcher, M.D., Dir. Ped. Educ., Harrisburg Hosp., Harrisburg 17101.

OPHTHALMOLOGY

August 3-7, 1970; Pittsburgh

C/S–**The Management of Retinal Detachment**; by Pitt; at Eye & Ear Hosp.; 8 hrs. ea. day; $250 fee; max. regis.: 12. Contact Wm. G. Everett, M.D., Eye and Ear Hosp., 230 Lothrop Street, Pittsburgh 15213.

PEDIATRICS

June 10, 1970; Sellersville

I/AMA–**Illness in Children as a Reflection of Family Turmoil (Postgraduate Series - 1 day ea. mo., 7 mos.)** by Hahnemann; at Grand View Hosp., 2 hrs. AAGP credit. Contact Henry Ruth, M.D., Postgraduate Co-ordinator, Grand View Hosp., Lawn Ave., Sellersville 18951.

Listed below are the names of physicians who served as teachers for one or more of the continuing medical education courses which have been presented by the Pennsylvania Medical Society in twelve areas of Pennsylvania during the year 1969-70. The Council on Education and Science gratefully acknowledges the assistance of each.

AARONS, Jerome H. – University of Pittsburgh
ADAMS, James – Blair Medical Center
ADLER, Lawrence N. – Montefiore Hospital, Pittsburgh
BABCOCK, J. Reed – Centre County Hospital
BATES, James – Geisinger Medical Center
BRESS, Alan N. – University of Pittsburgh
BRISCOE, Clarence C. – University of Pennsylvania
CADMAN, Thomas E. – Geisinger Medical Center
CADY, Joseph B. – Guthrie Clinic & Robert Packer Hospital
CALESNICK, Benjamin – Hahnemann
CAMMARATA, Roy J. – University of Pittsburgh
CHAMOVITZ, David – Aliquippa Hospital
CHAMOVITZ, Robert – University of Pittsburgh
CLARE, David W. – University of Pittsburgh
COHEN, Manfred – Montefiore Hospital, Pittsburgh
CONRAD, Paul – Western Pennsylvania Hospital
COOPER, William M. – University of Pittsburgh
COPPOLA, Ralph J. – Staunton Clinic
COURSON, Steven L. – University of Pennsylvania
CUSHING, William – Allegheny General Hospital
DAMESHEK, H. Lee – University of Pittsburgh
DENNEHY, John J. – Geisinger Medical Center
DEREZIN, Marvin – Hahnemann
DiPALMA, Joseph R. – Hahnemann
D'LUZANSKY, James J. – Blair Medical Center
DUTLINGER, Robert P. – Harrisburg Hospital
EKBERG, Norman L. – Geisinger Medical Center
ENERSON, Daniel M. – University of Pittsburgh
GOLDSTEIN, Morton L. – University of Pittsburgh
GRAHAM, William P. – University of Pennsylvania, Graduate Hospital
GREENBERG, Wayne V. – Allegheny General Hospital
GRUSKIN, Alan B. – Temple University
HARRIS, James R. – Institute of Pennsylvania Hospital
HEMPHILL, Richard W. – University of Pittsburgh
HERSHENSON, Lee M. – University of Pittsburgh
HILL, John B. – University of Pittsburgh
HOWARD, John M. – Hahnemann
HUNT, William – Geisinger Medical Center
JEFFREYS, William H. – Geisinger Medical Center
JONES, Frederick L. – Geisinger Medical Center
KARTUB, Mark – Conemaugh Valley Hospital
KELLY, John A. – Guthrie Clinic and Robert Packer Hospital
KELLY, John J. – Lankenau Hospital
KIMBER, William J. – Geisinger Medical Center
KIRSH, William J. – Altoona Hospital
KOOROS, M. A. – Allegheny General Hospital
LAUBACH, Charles A. – Geisinger Medical Center
LEE, Martin L. – Geisinger Medical Center
LIGHT, Harry G. – St. Luke's Hospital, Bethlehem
LIKOFF, William – Hahnemann
LISKER, Sheldon A. – University of Pennsylvania
LONGABAUGH, Edward E. – University of Pittsburgh
LOVETTE, John B. – Conemaugh Valley Hospital
LUFT, William C. – Guthrie Clinic & Robert Packer Hospital
MacKAY, Bruce R. – Guthrie Clinic & Robert Packer Hospital
MANCALL, Elliott L. – Hahnemann
MATEER, Frank – Western Pennsylvania Hospital
METZGER, Clyde – Presbyterian-University Hospital, Pittsburgh
MEYER, Kenneth K. – Guthrie Clinic & Robert Packer Hospital
MITCHELL, Fenton M. – Western Pennsylvania Hospital
MORRISON, Samuel S. – Geisinger Medical Center
MOSS, N. Henry – Temple University
McCARTHY, John J. – University of Pittsburgh
McDONALD, Robert H. – University of Pittsburgh

NAIDE, David – University of Pennsylvania
NAIMAN, J. Lawrence – St. Christophers Hospital
PINK, Herman A. – University of Pittsburgh
PITTENGER, Rex A. – Staunton Clinic
POLISH, Edwain O. – Hahnemann
PYTKO, V. F. – Geisinger Medical Center
ROSEMOND, George P. – Temple University
ROSEN, James A. – University of Pittsburgh
RUPP, Joseph J. – Jefferson
SACHS, Murray – University of Pittsburgh
SCHWARTZ, Gordon F. – University of Pennsylvania Graduate Hospital
SCOTT, John H. – Western Pennsylvania & Mercy Hospital
SEWELL, William H. – Guthrie Clinic Ltd.
SHAW, Ralph A. – Hahnemann
SMALLEY, Richard – Abington Memorial Hospital
SMITH, David S. – Temple University
SPITZER, Stanley – Hahnemann
STAMEY, Harry C. – Geisinger Medical Center
STEVENS, John M. – Institute of Pennsylvania Hospital
THOMAS, William G. – University of Pittsburgh
TYSON, R. Robert – Temple University
WATSON, William G. – University of Pittsburgh
WEAVER, Donald R. – Guthrie Clinic & Robert Packer Hospital
WERTZ, Robert E. – Blair Medical Center
WILDE, Ralph C. – University of Pittsburgh
WILSON, H. Randolph – University of Pittsburgh
WINGERT, J. Paul – Altoona Hospital
WOLFERTH, Charles C. – Hahnemann
ZABARENKO, Ralph N. – University of Pittsburgh
ZARRO, Vincent J. – Hahnemann

PMS 1970 SCIENTIFIC ASSEMBLY
November 16-19, 1970

Host Farm Resort Motel
Lancaster, Pa.

CLINICAL THERAPEUTICS

Theme: EMERGENCY MEDICINE

PENNSYLVANIA MEDICINE

meetings

JUNE

Conference on Practical Application of Physiology to Sports Medicine, June 17, 1970, Pennsylvania State University, State College.

American Medical Association, Annual Convention, June 21-25, 1970, Chicago, Illinois.

American Rheumatism Association Section of the Arthritis Foundation, June 18-20, 1970, Detroit Hilton Hotel, Detroit, Mich. Contact Miss Elizabeth Hartridge, ARA Executive Secretary, The Arthritis Foundation, 1212 Avenue of the Americas, New York, N. Y. 10036.

AUGUST

Germantown Academy Annual Symposium on Sports Medicine, August 13-14, 1970, Germantown Academy Ft. Washington, Pa.

SEPTEMBER

Eastern Pennsylvania Chapter, American College of Surgeons, Conference, September 10-11, 1970, Shawnee-on-Delaware, Pa. Contact Harry G. Light, M.D., Secretary, 65 E. Elizabeth Ave., Bethlehem, Pa. 18018.

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Dicarbosil®
ANTACID

Your ulcer patients and others will confirm it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.

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"HEY DOC –
THERE'S ONLY ONE K IN CHEMISTRY."

PENNSYLVANIA MEDICINE

write now

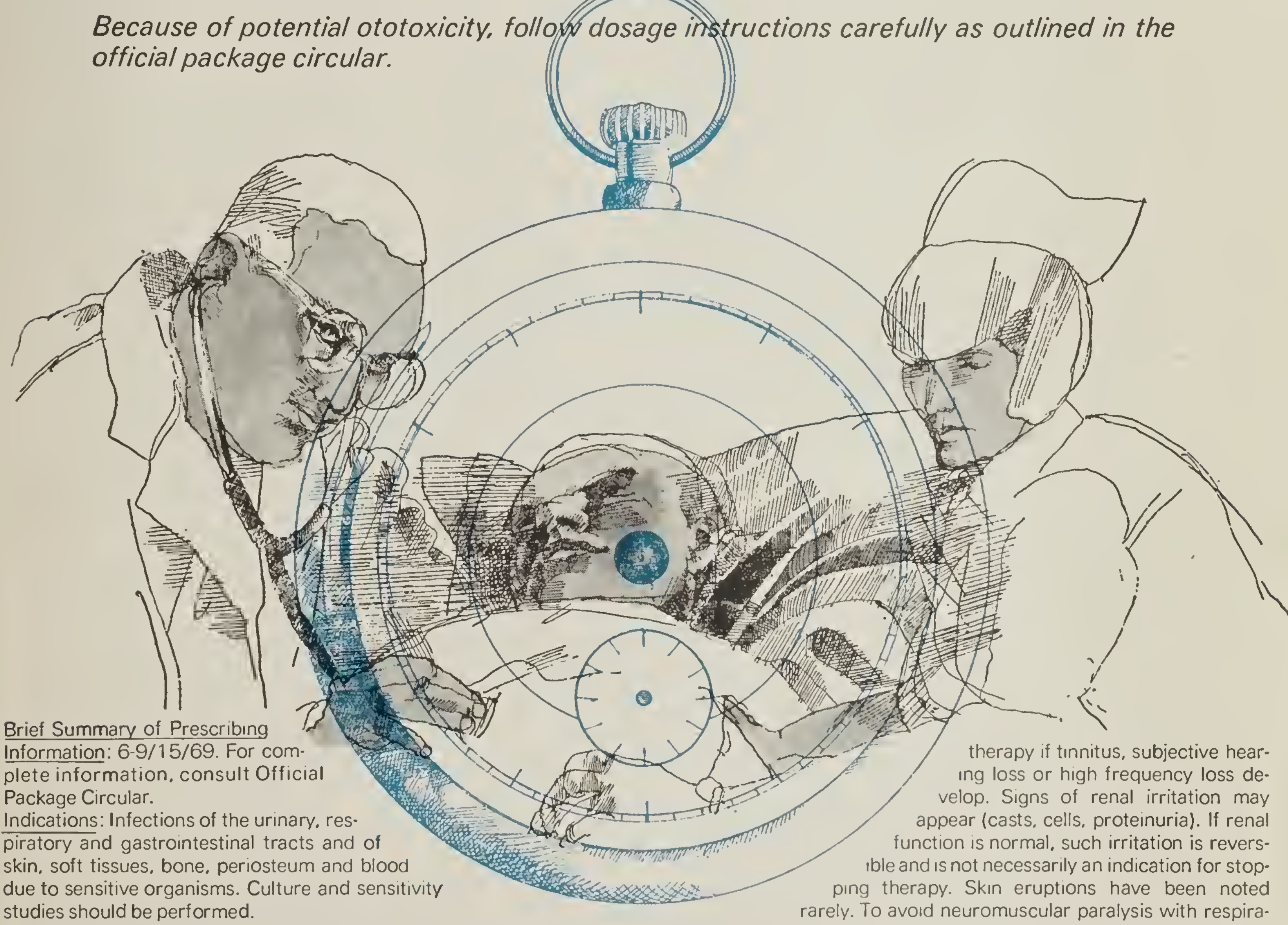
Books: *Current Procedural Terminology,* a uniform system of terminology and coding which provides physicians with a way to describe accurately the diagnostic and therapeutic procedures he has performed to be used as an aid in settling claims through insurance companies or Medicare-Medicaid, $2.00 from AMA, 535 N. Dearborn St., Chicago, Ill. 60610 . . . *Medicine and Stamps,* $1.00 from AMA, 535 N. Dearborn St., Chicago, Ill. 60610 . . . *Insurance Coverage and Mental Illness,* $5.00 from the Health Insurance Institute, 277 Park Ave., New York, N. Y. 10017 . . . Disadvantaged Children: *Health, Nutrition and School Failure,* published jointly by Harcourt, Brace and World Publishing Co., and Grune and Stratton, Inc. . . . *Radiological Health Handbook,* Public Health Service Publication No. 2016, $4.00 from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402 . . . *Redbook–Report of the Committee on Infectious Diseases of the American Academy of Pediatrics,* sixteenth edition, $2.00 from Publications, American Academy of Pediatrics, P.O. Box 1034, Evanston, Ill. 60204 .

A valuable hospital antibiotic —when there is no time

in severe systemic infections—postoperative bacteremia, Gram-negative/staph pneumonias or neonatal sepsis—Kantrex® (kanamycin sulfate) is often indicated before results of customary sensitivity tests can be reported. Clinical response is often seen within 24-48 hours in susceptible infections, with remission soon after.

10 years of experience confirm the continuing effectiveness of Kantrex® against many Gram-negative bacilli (most Pseudomonas are resistant) and staph.

Because of potential ototoxicity, follow dosage instructions carefully as outlined in the official package circular.



Brief Summary of Prescribing Information: 6-9/15/69. For complete information, consult Official Package Circular.

Indications: Infections of the urinary, respiratory and gastrointestinal tracts and of skin, soft tissues, bone, periosteum and blood due to sensitive organisms. Culture and sensitivity studies should be performed.

Contraindications: A history of hypersensitivity to the drug. Prior auditory damage by kanamycin or other agents may be a contraindication if effective alternative therapy is available.

Warnings: Since the drug is excreted almost entirely by glomerular filtration, renal malfunction can cause abnormally high serum levels of kanamycin which may prove ototoxic. Assess renal function periodically, both before and during therapy. Renal dysfunction or pre-renal azotemia sharply increase the risk of ototoxicity and permanent deafness. In such cases decrease the size and frequency of doses. Discontinue kanamycin and check hearing if azotemia increases. In older patients and patients receiving a total dose in excess of 15 Grams, watch carefully for signs of ototoxicity.

Precautions: If mycotic or bacterial superinfection occurs, discontinue kanamycin and initiate appropriate therapy. Cumulative ototoxic effects may be produced by concurrent or consecutive use of other ototoxic drugs. High doses may cause irritation at injection sites. The drug *should not* be physically mixed with other antimicrobials.

Adverse Reactions: Severe irreversible hearing loss may occur. Stop therapy if tinnitus, subjective hearing loss or high frequency loss develop. Signs of renal irritation may appear (casts, cells, proteinuria). If renal function is normal, such irritation is reversible and is not necessarily an indication for stopping therapy. Skin eruptions have been noted rarely. To avoid neuromuscular paralysis with respiratory depression, postpone intraperitoneal instillation in postoperative patients until recovery from anesthesia and muscle relaxants is complete.

Dosage and Administration: The usual dose is 7.5 mg./Kg./12 hours I.M. The average adult dose is 1 Gram daily and should not exceed 1.5 Gram even in the heaviest patients. Uncomplicated infections due to sensitive organisms should respond in 24 to 48 hours. If no response occurs in 5 days, stop therapy and recheck the bacterial sensitivities. Hydrate patients well to minimize renal irritation. Inject deeply into the upper outer quadrant of the gluteal muscle. Discard partially used vials after 48 hours.

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Luther Terry's first attack on smoking came in 1964 when, as Surgeon General of our Public Health Service, he released the epoch-making report of the Advisory Committee on Smoking and Health. This is a monument in our struggle against our illogical and destructive consumption of cigarettes. It set off a campaign which resulted in a distinct decrease in cigarette consumption. This must have been highly gratifying to Dr. Terry who deserves to be credited with the virtues needed to head an unpopular campaign. Unfortunately, consumption of cigarettes soon returned to its former level.

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